

# EXHIBIT A

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April 21, 2009

# In Sun, Oracle Sees a Software Gem

By [STEVE LOHR](#)

In its acquisition of [Sun Microsystems](#), [Oracle](#) sees a technology company that is a software gem, skillful in computer design and ripe for cost-cutting.

The big database software company's agreement Monday to buy Sun for \$7.4 billion, analysts say, also promises to make Oracle a more formidable competitor in the lucrative market for corporate computing, especially against [I.B.M.](#), Sun's previous suitor.

[The Oracle-Sun deal](#) came little more than two weeks after I.B.M. ended its talks with Sun. The Sun board balked after I.B.M. lowered its offer to \$9.40 a share from \$10. The Oracle bid, at \$9.50 a share, will have a net cost to Oracle of \$5.6 billion, after accounting for the value of Sun's cash and debt.

[Lawrence J. Ellison](#), Oracle's chief executive, said in a conference call Monday morning that Sun's Java programming language and its Solaris operating system were the main attractions. He said Java, the language used in most computer science schools and a technology used daily by millions of software developers, was "the single most important software asset we have ever acquired."

More of Oracle's corporate database software runs on Solaris, a version of Unix, than on any other operating system. In the last few years, however, Oracle has moved to make [Hewlett-Packard](#) and [Dell](#) stronger allies, as Sun's business has declined.

With Sun, Oracle will more directly compete against I.B.M., H.P. and other giants selling products and services used in corporate data centers by big corporations. The move by Oracle is part of the trend of the largest technology companies to assemble more offerings — hardware, software and services — for corporate customers, often through acquisitions, as I.B.M., H.P., [Cisco](#) and Oracle have all done in recent years.

"Oracle is transforming itself into a soup-to-nuts information technology vendor," said Gordon Haff, an analyst at Illuminata, a technology industry research firm.

Among industry rivals, the Oracle-Sun deal, analysts say, has the greatest potential impact on I.B.M. and H.P. “This deal promises to revitalize a systems competitor that I.B.M. and H.P. were writing off as dead,” Mr. Haff said.

Oracle can offer a more complete set of corporate software, from Sun’s operating system and programming tools to Oracle’s database and business applications to automate operations like finance and customer relations management.

The combined company, according to Oracle and Sun executives, will be able tweak and integrate its software to reduce costs and bugs, and to tighten security. Sun’s computer designers, they said, can tailor hardware to the combined company’s software, promising further gains in efficiency.

Executives from the two companies pointed repeatedly to the benefits of this “systems” approach, combining software and hardware. Yet while Sun makes most of its revenue from selling computers, Oracle executives emphasized that they did not regard Sun as a hardware company, which suggests factory ownership and large capital investments.

Safra Catz, Oracle’s president, called Sun a “modern technology company” that “outsources nearly all the manufacturing, assembly and servicing of its hardware.”

Yet Sun has struggled, and corporate and government customers have expressed doubts about its future, eroding its business. Under Oracle’s wing, analysts say, Sun suddenly looks much stronger.

George Weiss, an analyst at Gartner, said an Oracle-Sun combination “really amounts to another axis to I.B.M. in offering both hardware and software. This could open up significant new opportunities for both Oracle and Sun in a lot of corporate accounts, especially the teetering Sun accounts.”

The Oracle-Sun deal also promises to subtly alter the competitive fault lines in an industry where the biggest companies compete in some businesses and cooperate in others.

Sun is expected to be smaller and leaner under Oracle. “We will be able to run Sun at substantially higher margins,” Ms. Catz said. She estimated that Sun’s operations would generate an additional \$1.5 billion a year in operating profit, and add 15 cents a share to Oracle’s profit in the first year.

Under Oracle, she said, the Sun businesses would be able to achieve operating efficiencies “far in excess of what Sun has done to date.”

The Oracle and Sun executives made no comment about coming job cuts at Sun, and they took no questions during the conference call. But industry analysts estimated that Oracle's cost savings from Sun operations suggest job cuts of up to 10,000 workers from Sun's payroll of more than 30,000.

Sun shares closed at \$9.15, up 37 percent from their closing price of \$6.69 on Friday.

*Ashlee Vance contributed reporting.*

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# EXHIBIT B

**THE WALL STREET JOURNAL**

WSJ.com

JULY 28, 2010, 8:00 AM ET

## Eric Schmidt on Google's Next Tricks

Google has long been cast by Wall Street analysts and some tech executives as a “one-trick pony” because it earns nearly all revenue from one source—online ads. When asked for his response to that, Google CEO Eric Schmidt said in an interview: “I think that’s probably true.”



Reuters

Google Chairman and CEO Eric Schmidt

He added: “But if you’ve got a one-trick pony, you want the one we have. We’re in the ad business, and it’s growing rapidly. We picked the right trick.”

Much of the company’s online ad revenue has come from text ads that appear on search results pages of Google’s search engine and on millions of other sites.

But besides seeking to develop a social-networking service that would rival Facebook, [which WSJ reported today](#), the company is trying to obtain a greater share of the online display-ad market. It’s gotten recent traction thanks to its new auction system that matches buyers with sellers.

“This can be a powerful business, a 10-plus billion-dollar business” per year for Google, Schmidt said.

He also said Google is positioning itself to earn \$10 billion or more per year in the mobile device business, thanks to its Android operating system.

Google is giving away the Android software for free to device makers, who are using it to power dozens of popular devices. By spreading Android, which is growing at a rate of 160,000 new handset activations per day, the company ensures that its Internet search, maps and other ad-supported services will endure as users shift to mobile devices.

“If we have a billion people using Android, you think we can’t make money from that?” Schmidt asked rhetorically. All it would take, he said, is \$10 per user per year. Among other things, Google might earn such sums from selling access to digital content from newspapers.

A billion people paying for newspaper content? Sounds good to us.

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## 25 Percent, 50 Percent ... What's In A Number?

Law360, New York (June 21, 2011) -- As has been much reported, in this venue and others, the United States Court of Appeals for the Federal Circuit, in its recent decision in *Uniloc USA Inc. and Uniloc Singapore Private Limited v. Microsoft Corporation*, determined that the so-called "25-percent rule" is a "fundamentally flawed tool" in patent damages calculations.

In particular, the court found the use of the 25-percent rule -- in which the starting point (and, often, the ending point) for damages is an amount equal to 25 percent of the expected profits derived from a product embodying the invention -- to be "arbitrary, unreliable and irrelevant." We agree wholeheartedly.

As explained in a chapter in a book edited and published by economists at NERA Economic Consulting, "A Critique of Noneconomic Methods of Reasonable Royalty Calculation," the 25-percent rule is flawed precisely because it has no relationship with the incremental value of the technology embodied in the patent.

By way of illustrating the fundamental flaw in the rule, a patented technology that only allows the patent holder to increase the profit derived from his product by 1 percent (for example, a patent on an unnecessary but clever feature) would, at least as a starting point, be eligible for damages amounting to 25 percent of the product's profit. That makes no sense, and the "25-percent rule" was justifiably -- and at long last -- refuted.

One question that the *Uniloc* case has raised in the context of patent damages is whether another oft-used percentage -- namely the midpoint in the bargaining range of a hypothetical negotiation -- is subject to the same critique as was successfully leveled at the 25-percent rule. The answer to that question is "no." While care must be used in its application, the consideration of the midpoint of a bargaining range is a useful paradigm, rooted in rigorous, well-established economic theory and -- in marked contrast to the 25-percent rule -- directly tied to the facts of the case.

The midpoint of a hypothetical bargaining range is directly tied to the facts of the case, and, specifically, to the incremental value of the patent, because the endpoints of that bargaining range -- namely, the two parties' bargaining positions -- depend on what each party stands to gain or lose as a result of the hypothetical negotiation. Like any other bargaining transaction, before reaching an agreement, the parties will consider the costs and benefits that they would experience should a bargain be struck.

In any bargaining situation, for both parties to ultimately agree on the outcome, the expected benefits of the agreement must outweigh the expected costs for each party. The costs and benefits, therefore, dictate the range of feasible outcomes whereby both parties can benefit from the licensing agreement.

These costs and benefits, which are case-specific, depend on factors such as the benefits of a license to the infringer, the cost to the infringer of designing around the patent, the profits at risk to the patent holder as a result of the infringement. That is, the bargaining range is explicitly determined by considering the incremental effect of licensing the patented technology, relative to the infringer's next-best, non-infringing available alternative.

In particular, it is not a clear-cut, black-and-white determination as to whether one should look at the profits of the whole product, the profits related to a specific functionality, or some other set of profits; rather one must determine which profits are incremental to the specific patented technology. (Of course, in some instances, the patented technology may be the only method of implementing a particular functionality or of selling the product as a whole, and, as such, the profits related to the feature or the entire profits of the product may correctly be viewed as the incremental profits.)

Once that bargaining range has been established, by a review of the facts of the case, any outcome within that bargaining range has, at a minimum, the desired characteristic that each party would be better off under the terms of the deal than it would be without the agreement. Outcomes derived from the 25-percent rule were not necessarily consistent with that basic economic premise of bargaining.

The next step is to determine where, within that bargaining range, the reasonable royalty would fall. Economics teaches that the final outcome of the negotiation within the bargaining range depends on the ability of each party to credibly threaten to continue to negotiate until the negotiation reaches a desirable outcome for that party. In economics, this is called a party's discount rate.

The intuition is that, if one party is more motivated than the other to come to an agreement perhaps because that party needs the cash for continued operations or because the usefulness of the patent diminishes considerably if the agreement is delayed then the more motivated party will push harder for a deal and may therefore settle for a less desirable outcome, all else equal.

If, however, both sides have equal bargaining power a reasonable place to begin an analysis of a reasonable royalty then a well-known economic model of bargaining predicts that, under certain assumptions, the parties will split the benefit of the bargain, and the reasonable royalty corresponds to the midpoint of the bargaining range. (See Rubinstein, A. (1982), "Perfect Equilibrium in a Bargaining Model," *Econometrica*, 50:97-110.)

In particular, the model is one in which the two parties alternate making offers and counteroffers until an agreement is reached and in which there is no advantage to being the first to make an offer. Of course, as with all economic models, care must be taken to ensure that the model's assumptions are consistent with the facts of the case. However, the midpoint of the bargaining range does provide a reasonable and economically grounded starting point for an analysis of where, within that range, the reasonable royalty falls.

The initial evidence from the courts indicates that our viewpoint will prevail. In one recent case (*Sanofi-Aventis Deutschland GmbH et al. v. Glenmark Pharmaceuticals Inc., USA et al.*), the District Court of New Jersey denied a motion to exclude reasonable royalty testimony that relied on the midpoint of the bargaining range because this methodology is based on the specific facts of the case and is, therefore, not akin to the use of the 25-percent rule. Hopefully, future courts considering this issue will concur.

--By Dr. Christine Siegwarth Meyer and Dr. David Blackburn, NERA Economic Consulting

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# EXHIBIT F

*The Columbia*

# SCIENCE AND TECHNOLOGY LAW REVIEW

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## MAKING SENSE OF “APPORTIONMENT” IN PATENT DAMAGES<sup>1</sup>

Elizabeth M. Bailey  
Gregory K. Leonard  
Mario A. Lopez

Unreasonably large damages awards in patent litigation have been an important force in motivating the movement for patent reform. “Apportionment” has found support as a solution to problem damages awards. Under apportionment, the portion of the overall value of the product that is “attributable” to the patented technology is identified. Then, reasonable royalty damages are calculated with reference to this apportioned value of the patented technology rather than the overall value of the product. While the problems that have motivated the apportionment movement are real and serious, apportionment makes sense as a solution only under the assumption that an economically invalid approach to calculating damages is being taken in the first place. A more sensible solution is to require litigants to take an economically valid approach to damages. In addition, when there are complementarities between assets, such that the combined use of two or more assets is worth more than their individual use, no unique way exists to apportion the overall value of the product among the assets (including the patented technology at issue), rendering apportionment infeasible in many cases. We consider these and other issues that surround apportionment.

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## I. INTRODUCTION

Controversial patent damages awards have put patent damages at the center of the debate over patent reform. The award in *Lucent Technologies, Inc. v. Gateway, Inc.* (“*Lucent*”) is one such example. In a jury trial, Microsoft was found to have infringed a patent referred to as the Day patent that describes a method to enter information on a computer screen without using a keyboard (e.g., by using a stylus), which Microsoft was found to have used in its “date-picker” calendar tool in Microsoft Outlook. The jury awarded \$358 million in damages to Lucent. On appeal, however, the Court of Appeals for the Federal Circuit (“CAFC”) found that “the infringing use of the date-picker tool in Outlook is but a very small component of a much larger software program”<sup>2</sup> and concluded that the “damages calculation lacked sufficient evidentiary support.”<sup>3</sup> The matter was remanded to the lower court for a new trial on damages.

In recent years, Congress has considered a variety of legislative proposals designed to address the issue of unreasonably large damages awards.<sup>4</sup> Of particular concern are situations where the patented technology is but one of many technologies and assets that are incorporated into a product.<sup>5</sup> “Apportionment” has been proposed as a solution to these problems.<sup>6</sup> Under apportionment, the portion of the overall value of the product that is “attributable” to the patented technology is identified. Then, reasonable royalty damages are calculated with reference to this apportioned value of the patented technology rather than the overall value of the product.

In this article, we explore apportionment. While the problems that have motivated the apportionment movement are real and serious, apportionment makes sense as a solution only under the assumption that an economically invalid approach to calculating damages is being taken in the first place. Apportionment relieves a symptom, but not the cause, of problem damages awards. Adoption of apportionment as a damages calculation methodology may arbitrarily reduce reasonable royalty awards, even for

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<sup>2</sup> *Lucent Technologies, Inc., et al. v. Gateway, Inc., et al.*, 580 F.3d 1301, 1337 (Fed. Cir. 2009), cert. denied, 30 S. Ct. 3324 (2010).

<sup>3</sup> *Id.* at 1308.

<sup>4</sup> *See, e.g.*, The Patent Reform Act of 2009, S. 515, 111th Cong. (2009); *see also, e.g.*, S. 610, 111th Cong. (2009); H.R. 1260, 111th Cong. (2009); The Patent Reform Act of 2010, S. Managers’ Amend., 111th Cong. (2010) (Managers’ amendment to Senate Bill 515 as reported by S. Comm. on the Judiciary, March 4, 2010).

<sup>5</sup> *E.g.*, *Patent Reform in the 111th Congress: Legislation and Recent Court Decisions Before the S. Comm. On the Judiciary*, 111th Cong. 14 (2009) (statement of Mark A. Lemley, Professor of Law, Stanford Law School), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111\\_senate\\_hearings&docid=f:54059.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_senate_hearings&docid=f:54059.pdf) (testifying that the Georgia-Pacific factors are open to manipulation and that they do not reflect the contribution of the patented technology to the technology at issue).

<sup>6</sup> *See, e.g., id.* at 61–62. *See also*, Brian J. Love, *Patentee Overcompensation and the Entire Market Value Rule*, 60 Stan. L. Rev. 263, 272 (2007).

valuable new inventions counter to the purpose of patent system. A more sensible solution is to require litigants to take an economically valid approach to damages. In that case, apportionment would not be necessary.

In addition, an attempt to implement apportionment would face serious practical problems. When there are complementarities between assets, such that the combined use of two or more assets is worth more than their individual use, no unique way exists to apportion the overall value of the product among the assets (including the patented technology at issue). Unless a particular apportionment scheme was specified in patent reform legislation, substantial legal ambiguity would be created and courts, juries, and parties would bear a heavy litigation burden. Again, the alternative of requiring litigants to take an economically valid approach to damages is a much more attractive alternative from the perspective of good public policy.

## II. APPORTIONMENT RELIEVES A SYMPTOM, NOT THE CAUSE, OF “PROBLEM” DAMAGES AWARDS

The apportionment movement has been motivated by scenarios such as the following. A damages expert provides testimony in which a reasonable royalty damages award is calculated by first determining that the average royalty rate in an industry is, say, 1%, and then applying this royalty rate to a royalty base consisting of the revenue of a product that incorporates the patented technology.<sup>7</sup> However, the patented technology covers only a “small” component of the product, and many other technologies and assets are required to produce the product. Therefore, the resulting damages award (in dollars) seems out of line with the contribution of the patented technology to the product.

This scenario played out recently in *Cornell University v. Hewlett-Packard Co.* (“*Cornell*”), presided over by Judge Rader of the CAFC, who was sitting by designation.

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<sup>7</sup> The approach of using “industry averages” and supposedly “comparable” licenses to determine the royalty rate in a given situation often fails to be economically sound in its own right. The supposedly comparable licenses are often not, in fact, comparable. License agreements can vary substantially both in terms of the patented technology being licensed and the economic conditions of the parties to the agreement. Unless the important characteristics are similar across two licenses, they will generally not be comparable. Along the same lines, the economic circumstances surrounding the “typical” or “industry average” licensing negotiation that led to the “typical” or “industry average” royalty rate are unlikely to correspond to the specific economic circumstances of the patented technology and parties at issue in the litigation. Before an existing license can be used as a benchmark, one must carefully analyze whether it is truly comparable in terms of factors such as the technology covered, the product sold by the licensee, the degree of competition between the licensor and licensee, cross licensing arrangements, and other considerations. The CAFC has pointed out this issue in recent opinions. In *Lucent*, the CAFC determined that some of the licenses that the plaintiff claimed were comparable were in fact “radically different from the hypothetical agreement under consideration for the Day patent.” As to the remainder of the licenses, the CAFC wrote that they could not “understand how the jury could have adequately evaluated the probative value of those agreements,” characterizing the evidence presented as “superficial” and “doubtful that the technology of those license agreements is in any way similar to the technology being litigated here.” *Lucent*, 580 F.3d 1301, 1328–29.

A jury had found that Hewlett-Packard infringed a patent that describes a method to read a component of a processor's instruction reorder buffer ("IRB"). The patented technology was claimed to enhance the throughput of a processor. Cornell's damages expert initially testified that the jury should compute damages using a royalty base encompassing Hewlett-Packard's earnings from its sales revenue from its entire servers and workstations.<sup>8</sup> Yet, the patented technology was "a small part of the IRB, which is a part of a processor, which is part of a CPU module, which is part of a 'brick,' which is itself only part of the larger server."<sup>9</sup> In other words, the patented technology related to only a very small component of the overall product that was being used to form the royalty base.

Judge Rader ruled in a pre-trial motion that servers were not an appropriate royalty base for calculating the reasonable royalty.<sup>10</sup> What followed was essentially application of an apportionment approach.<sup>11</sup> Cornell's expert testified that the royalty base should be reduced from servers to "CPU bricks," which yielded damages of \$184 million.<sup>12</sup> The jury awarded this amount. However, Judge Rader was troubled by the size of the damages award.<sup>13</sup> In ruling on a Hewlett-Packard post-trial motion, Judge Rader further reduced the royalty base from CPU bricks to processors, and applied the "jury's uncontroverted royalty rate of 0.8 percent"<sup>14</sup> to this reduced royalty base.<sup>15</sup> This

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<sup>8</sup> *Cornell Univ. v. Hewlett-Packard Co.*, 609 F.Supp.2d 279, 284 (N.D.N.Y. 2009).

<sup>9</sup> *Id.* at 283. The "CPU brick" is Hewlett-Packard's term for the combination of the processor, a temperature controlling thermal solution, external cache memory, and a power converter.

<sup>10</sup> *Cornell Univ. v. Hewlett-Packard Co.*, No. 01-CV-1974, 2008 WL 2222189, at \*4 (N.D.N.Y. May 27, 2008).

<sup>11</sup> This type of apportionment attempts to limit the use of the entire market value rule (where the entire value of the product is used as the royalty base) to instances where the patented feature is the basis for demand and to some smaller base otherwise. *See Love, supra* note 6, at 272 ("To prevent overcompensation and its attendant harms, the entire market value rule must be scaled back to its original role as a special case of the apportionment requirement, such that it may not be applied unless—as its name suggests—the patent at issue indeed accounts for the entire value of the infringing article.") *See also*, Eric E. Bensen & Danielle M. White, *Using Apportionment to Rein in the Georgia-Pacific Factors*, 9 Colum. Sci. & Tech. L. Rev. 1, 18–19 (2008) ("Where the patent was for an improvement or component, patentees could satisfy their apportionment burden by showing that the entire market value of the infringing product was attributable to the patented invention . . .").

<sup>12</sup> *Cornell*, 609 F.Supp.2d 279, 284.

<sup>13</sup> In particular, the court stated that "[t]he important point is not the way that Cornell derived this royalty base, but that it exceeded again this court's direction and proceeded to attempt to show economic entitlement to damages based on technology beyond the scope of the claimed invention." *Cornell*, 609 F.Supp.2d 279, 284–85.

<sup>14</sup> *Id.* at 292.



reduced damages to \$53 million. In short, Judge Rader identified the portion of the revenue of the overall product (the server) that was closely related to the patented technology, namely the processor, and then used that revenue as the royalty base.

Reducing the royalty base to which a royalty rate is applied is certainly an effective way to reduce a damages award that is overstated. However, it is also a crude approach. Typically, there are only a finite number of possible royalty bases that could be used, with discrete jumps in size between them. For example, in *Cornell*, the processor royalty base was less than one-third the size of the CPU brick royalty base. It is unlikely that the dollar royalty amount that results from multiplying a specified royalty rate by each of the small number of possible royalty bases is exactly equal to the value of the patented technology.

More fundamentally, the apportionment approach of reducing the royalty base treats the symptom (an overly large damages award), without addressing the underlying cause. The underlying cause of problem damages awards is the approach sometimes taken by damages experts of choosing the royalty rate and royalty base independently of each other, and without reference to the economic value of the patented technology. Rather than directing that apportionment be used to eliminate problem damages awards, it would be preferable for patent reform legislation or the CAFC to require damages experts to take an approach that is consistent with sound economic principles.<sup>16</sup> Then, apportionment becomes unnecessary.

Under a sound economic approach, the reasonable royalty award (in dollars) should reflect the incremental value (in dollars) of the patented technology to the defendant as compared to the next best alternative. It should not matter what royalty rate or royalty base are used, as long as the product of the two yields a result (in dollars) that is in line with the patented technology's incremental value. Put another way, the royalty rate and royalty base must be chosen together in order for the reasonable royalty (the multiplication of the two) to make economic sense. It is when the rate and base are chosen independently of each other that problem awards (i.e., awards out of line with the economic value of the patented technology) arise.

In the context of the *Cornell* case, suppose that the patented technology resulted in an increase in a server's processing speed relative to what was achievable with the next best technology. Enhanced speed may result in greater sales of, and higher prices for, servers, which in turn leads to incremental profits due to the patented technology.<sup>17</sup> These incremental profits represent the largest *dollar amount* that a rational licensee

<sup>15</sup> Determining the royalty base for processors was not straightforward because processors were generally not sold separately from CPU bricks. *Cornell* disputed the method by which Hewlett-Packard's expert had calculated the processor royalty base.

<sup>16</sup> Indeed, without performing a proper economic analysis, it is difficult to know if a damages award is "too large" or the degree to which it is too large. As a result, an adjustment after-the-fact is likely to be ad hoc and out of line with the true economic value of the patent.

<sup>17</sup> This analysis would have to take into account any incremental costs associated with using the patented technology as well.

would pay for the right to use the patented technology.<sup>18</sup> The choice of the royalty base should be largely irrelevant as long as the royalty rate is set, *conditional on the choice of royalty base*, so as to reflect the economic value (in dollars) of the patented technology.<sup>19</sup>

The CAFC appears to be headed in the direction that we advocate. In its opinion in *Lucent*, the CAFC stated that “[t]here is nothing inherently wrong with using the market value of the entire product [as the royalty base], especially when there is no established market value for the infringing component or feature, so long as the multiplier [i.e., the royalty rate] accounts for the proportion of the base represented by the infringing component or feature.”<sup>20</sup>

### III. IN THE PRESENCE OF COMPLEMENTARITIES, NO UNIQUE APPORTIONMENT OF VALUE EXISTS

Taken in the most favorable light, advocates of apportionment argue that when calculating reasonable royalties, a royalty rate should be applied to the incremental value added by the patented technology at issue rather than to the overall value of the product.<sup>21</sup> However, the specific methodology that has been put forward to perform apportionment fails to recognize that patented technologies typically create value that is “greater than the sum of the parts,” i.e., synergies, and incorrectly attributes all of the synergies to the infringer.

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<sup>18</sup> The procedure we would typically propose is to first define the royalty base as the sales of the smallest product that (1) incorporates the patented feature and (2) can be separately priced (either through actual arm’s length transactions or a reliable approximation). Then, given that base, the royalty rate is chosen to reflect properly the economic value of the patented technology. This choice of royalty base is consistent with real world licensing practices. Licensors prefer to have a royalty base that is easily verifiable and not subject to manipulation. Licensees prefer to limit the royalty base to the smallest possible product to limit the distortionary effects of the royalty “tax” on their incentives.

<sup>19</sup> A potential practical limitation to our proposed approach is that juries may be hesitant to award a very small royalty rate, assuming a large royalty base has been chosen, even if that small royalty rate properly reflects the economic value of the patented technology. For example, a jury might be hesitant to award a royalty rate of 0.0001 percent. For this reason, as a litigation strategy, the defendant may prefer to make the case for a lower royalty base (with a correspondingly higher royalty rate). This practical problem would seem to resuscitate the need for apportionment, at least as a means of reducing the royalty base. However, it should be recognized that a symmetric problem exists for plaintiffs. If a very small royalty base was to be the rule, plaintiffs might have difficulty convincing juries to award a large royalty rate, even if that rate were economically sound given the choice of royalty base. For example, a 50 percent royalty rate may be economically appropriate given a narrow royalty base, yet the defendant might be able to persuade a jury that such a rate was out of line with “industry practice.”

<sup>20</sup> *Lucent Technologies, Inc., et al. v. Gateway, Inc., et al.*, 580 F.3d 1301, 1339 (Fed. Cir. 2009).

<sup>21</sup> See, e.g., Love, *supra* note 6.

The synergies, or additional value obtained by combining assets, are the result of complementarities among the assets. To make the concepts concrete, suppose two companies, A and B, each have an asset. Company A can use its asset to make product A and receive value  $V_A$ .<sup>22</sup> Company B can use its asset to make product B and receive value  $V_B$ . Alternatively, the two companies can join forces and make product AB, which will generate total value  $V_{AB}$ . Product AB may be an improved version of product A or B, or it may be an entirely different type of product altogether. If  $V_{AB} > V_A + V_B$ , it is said that there are (strict) “gains to trade,” i.e., the two companies would be better off joining forces than pursuing their respective alternatives. The difference  $S = V_{AB} - V_A - V_B$  represents the amount of the gains to trade, or the synergies generated by combining their assets. Neither company can access  $S$  without the other.<sup>23</sup>

The value of product AB can be rewritten as  $V_{AB} = V_A + V_B + S$ . It should be clear that there is no unique way of dividing the value of product AB between the two assets that are used to create it. This is because the value of the synergies  $S$  is “joint and common” to the two assets. Both asset owners can lay claim to  $S$ . Any mechanical rule to apportion the synergies between the assets needed to create the synergies is analogous to an accounting rule to allocate “joint and common” costs among the products that those costs support. Economists have long recognized that any such cost allocation is completely arbitrary.<sup>24</sup> Similarly, any rule to apportion the synergies between the assets is necessarily arbitrary.

To see the difficulties, suppose Company B argued that its asset should be valued by comparing the value of product AB to the value of the product that could be produced without Company B’s asset (i.e., product A). Under that argument, the value of the asset of Company B would appear to be  $V_{AB} - V_A = V_B + S$ . However, Company A could make a similar argument and claim that the value of its asset was  $V_{AB} - V_B = V_A + S$ . Yet, both companies cannot be awarded these values, or the sum would exceed the value of product AB.

In proposing a framework for apportionment, Love states that “when the patent at issue covers only a component of or improvement to the infringing item, the value of the sales or uses of that [infringing] item must be apportioned between the patented invention and the remaining unpatented components.”<sup>25</sup> According to this construct, Company B could claim that the value of the “unpatented components” (i.e., Company B’s asset) is  $V_{AB} - V_A$  and the apportioned value of Company A’s patent therefore should be limited to

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<sup>22</sup> “Value” here would be the net present discounted value of the expected profits from selling the product.

<sup>23</sup> To reiterate,  $V_A$  represents the best Company A could do by itself without access to Company B’s asset, and similarly for  $V_B$ .

<sup>24</sup> William J. Baumol, *On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry*, 67 Am. Econ. Rev. 809 (1977).

<sup>25</sup> Love, *supra* note 6, at 268.

$V_A$ . From above, however, this incorrectly attributes all of the synergies,  $S$ , to Company B's asset. The approach proposed by Love would only make economic sense in the unlikely situation in which the combination of Product A with Product B created no synergies (i.e.,  $S = 0$  such that  $V_{AB} = V_A + V_B$ ).<sup>26</sup>

As discussed above, however, combining patented technologies typically creates value that is greater than the sum of the parts. For example, patent pools often bring together various technologies that are necessary to create the product in question. The stand-alone value of any one patent in the pool may be low or close to zero unless combined with the other patents in the pool. To take another example, consider a patent related to a microprocessor incorporated into mobile phones. A chip that provided some improvement (in speed, efficiency, etc.) may enable other functionality on the phone, such as an improved touchscreen interface, software applications with greater capability, greater video functionality, or improvement of other features of the phone. While apportionment would recommend that the royalty base be limited to the chip "portion" of the phone, this delineation may miss synergies between the patent at issue and the other features of the mobile phone. It would be incorrect to attribute all such synergies to the infringing company (or, for that matter, the patented feature). Instead, we can ask the more direct question of the additional profits that the manufacturer could be expected to make by incorporating the patented feature into its product. If the patented feature provides only a small improvement over existing technology (or, equivalently, a good non-infringing alternative to the patent exists), then the royalty should be limited. The manufacturer would not be willing to pay much for access to that technology. Using this same methodology, a major innovation would result in a higher royalty. In this way, an economic approach will produce damages awards that are consistent with the purpose of patent laws such that the incentive to innovate is commensurate with the value to society of the innovation.

#### IV. A MARKET-BASED APPROACH FOR DETERMINING HOW TO DIVIDE VALUE BETWEEN TWO ASSET OWNERS

Because any mechanical apportionment "rule" is inherently arbitrary (and thus would simply lead to irresolvable disputes in litigation), a better approach to determining how value should be divided between asset owners is to analyze how the asset owners would negotiate a split of the synergies. This approach is market-based and therefore is not arbitrary.

Economic principles suggest that the negotiated payouts to the two companies must satisfy several conditions. First, the payout to company A,  $\pi_A$ , must satisfy  $\pi_A \geq V_A$  or company A would prefer to pursue its alternative (product A). The value

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<sup>26</sup> Love's model assumes that the various technologies of a product are additive, such that each additional patent adds value independent of other technologies—but with no synergies between technologies. This leads him to conclude that the value of the entire product can only be attributed to the patented technology when the value of all the other components is zero. Love, *supra* note 6, at 276. When synergies exist among the technologies, this is not true.

from product A is the opportunity cost that Company A faces (i.e., the foregone profit) in pursuing product AB. Company A must earn a payout from Product AB that exceeds its opportunity cost. Similarly, the payout to company B must satisfy  $\pi_B \geq V_B$ . The sum of the payoffs must of course satisfy  $\pi_A + \pi_B = V_{AB}$ . Under these conditions, each company's payout can be thought of as the value of its alternative (the opportunity cost) plus a fraction of the gains to trade:

$$\begin{aligned}\pi_A &= V_A + \lambda S \\ \pi_B &= V_B + (1 - \lambda)S\end{aligned}$$

where  $\lambda$  is the negotiated split of the gains to trade.

Economic models of bargaining suggest that the split of the gains to trade will be influenced by the companies' relative levels of patience (as reflected by the rate at which they discount future expected cash flows).<sup>27</sup> The more patient company is willing to let the negotiations play out longer and therefore receives a larger split of the gains to trade than the less patient company. When the two companies are sufficiently patient and are roughly equally patient, the gains to trade will be approximately equally divided.<sup>28</sup> In this case,  $\lambda = 0.5$ .<sup>29</sup>

Before applying this framework to patent licensing negotiations, we make an observation about patents as assets in this context. Unlike a physical asset, such as a manufacturing plant, the use of an intellectual property asset in one application does not necessarily preclude its simultaneous use in another application.<sup>30</sup> This can reduce the opportunity cost associated with using intellectual property in a given application. For example, suppose Company A's asset is a patented technology. By licensing Company B under its patent, Company A may not need to give up any opportunities to license the same technology to other companies that operate in different markets than Company B. We now consider several licensing examples.

*Example 1: Dividing Value Between Asset Owners When Both Companies Have Blocking Assets*

Suppose Company A holds a patent on a technology. Company A has no ability to produce any product itself, and there are no suitable licensees other than Company B.

<sup>27</sup> See Ariel Rubinstein, *Perfect Equilibrium in a Bargaining Model*, 50 *Econometrica*, Jan. 1982, at 97.

<sup>28</sup> As a technical matter, in the Rubinstein model of bargaining, the party that has the opportunity to make the first offer receives a slightly higher split of the gains to trade. This advantage goes to zero as the two parties become infinitely patient, or equivalently, as the time between offers goes to zero.

<sup>29</sup> Whether it is appropriate to apply the framework described here to a particular real world situation will depend on the specific facts of the case.

<sup>30</sup> Unless, of course, prevented by contractual obligations such as an exclusive license.

Company B has important complementary know-how to the patented technology, but cannot use this know-how to produce any product without a license to Company A's patent. If licensed, it could produce and sell product AB and generate profit  $V_{AB}$ , which accounts for all expected future economic costs associated with developing and offering product AB. Under these assumptions,  $V_A = 0$ ,  $V_B = 0$ , and  $S = V_{AB}$ . If the two companies are equally patient, they will equally split the profits from the patented product.<sup>31</sup> Essentially, each company holds a "blocking" asset that is required to produce product AB, and they have no alternative use for their assets (we call this a case of "completely blocking" assets). The resulting "Mexican standoff" yields an equal split of the profits.

In some situations it may seem counterintuitive that both companies have blocking assets. For example, suppose Company A uses its patented technology to make a product, product A, that is sold in a different market from the market in which product AB would be sold. Suppose further that product A is sold at \$500 per unit and generates profits of \$250 per unit. Company B, on the other hand, has no means by which to earn a profit on its know-how without getting a license from Company A. Product AB, which combines Company A's patented technology with Company B's know-how, would be sold at \$5,000 per unit and would generate profits of \$2,500 per unit. One might think that Company B has a blocking asset and thus Company B's know-how must be "valued" at \$2,250 (the \$2,500 profit per unit from Product AB less the \$250 profit per unit for the product that utilizes Company A's patented technology).<sup>32</sup> However, this is incorrect as a matter of economics. Company A's patent is just as blocking as Company B's know-how in making Product AB. This puts the two companies on equal footing, each able to block the other. As a result, they would negotiate an even split of the product AB profits (assuming both companies are sufficiently and equally patient).<sup>33</sup>

*Example 2: Dividing Value Between Asset Owners When Company A Has a "Partially Blocking" Asset*

Suppose Company A has a patented technology with no ability to produce a product itself, and there are no suitable licensees other than Company B. Company B has know-how, which allows it to produce a product B that generates profit  $V_B$ . Licensing Company A's patented technology would allow Company B to offer an "improved" version of its product, product AB, that adds the product feature enabled by Company

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<sup>31</sup> Again, assuming that both parties are also sufficiently patient.

<sup>32</sup> That is,  $V_{AB} - V_A$ .

<sup>33</sup> A related principle is that a company with more than one blocking asset does not get a larger piece of the pie than a company with only one blocking asset. However, in the case where the validity and infringement of patents are uncertain, so that blocking is uncertain, more than one potentially blocking patent (subject to validity and infringement) can strengthen a company's bargaining position because the probability that at least one of the patents turns out to be blocking increases with the number of patents.



A's patent. Product AB will generate profit  $V_{AB}$ . If product AB is offered, Company B would no longer offer product B. However, if product AB is not offered, Company B has the ability to continue selling non-infringing product B. In this situation, Company A has a "partially blocking" patent on a product feature. In this case,  $V_A = 0$  and  $S = V_{AB} - V_B$ . It is unclear how to implement apportionment in this case, since the value of Company A's patent can only be realized in combination with Company B's know-how. The economic approach recognizes that the two companies are negotiating only over the incremental profit  $S$  that adding Company A's patented feature would bring: if the feature is minor,  $S$  is a small fraction of  $V_{AB}$  and the royalty rate would be relatively small.<sup>34</sup>

## V. ADDRESSING "ROYALTY STACKING"

### A. Apportionment Is a Crude Solution to Royalty Stacking Problems

Many complex technology products incorporate multiple different features, each of which may be covered by a patent. For example, in *Lucent*, Microsoft Outlook was described as "an enormously complex software program comprising hundreds, if not thousands or even more, features."<sup>35</sup>

Royalty stacking refers to the potential problem that can arise from situations in which a single product may require a license from multiple patent holders. The total royalties paid by the manufacturer is the sum (or stack) of royalties paid to each individual patent holder. Some companies, particularly those manufacturers that produce complex products that incorporate multiple patents, have argued that the sum of the royalties paid to each individual patent holder may leave too little profit for the manufacturing company, reducing their own incentives to innovate. Some have even argued that royalties could exceed the total profit of a product.<sup>36</sup> In such a case, the

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<sup>34</sup> Note that in this bargaining situation, Company A does not have the ability to expropriate more than  $S$  because Company B can turn to its non-infringing alternative, valued at  $V_B$ , if the royalty were too high.

<sup>35</sup> *Lucent Technologies, Inc., et al. v. Gateway, Inc., et al.*, 580 F.3d 1301, 1332 (Fed. Cir. 2009).

<sup>36</sup> For example, in the Senate Judiciary Committee hearing on the 2009 Patent Reform Act, Steve Appleton, Chairman and CEO of Micron Technology, Inc., testified:

The difficulty is that the current patent litigation system too easily allows damages to be assessed based on the value of the whole product, rather than the contribution of the patent. If we assume thousands of patents relate to this device, the resulting damages under current law would result in an amount that would exceed the total amount of revenue derived from the product.

Patent Reform in the 111th Congress: Legislation and Recent Court Decisions Before the S. Comm. on the Judiciary, 111th Cong. 5 (2009) (statement of Steven Appleton, Chairman and

magnitude of the combined royalties would deter the introduction of the product, an economically inefficient outcome.<sup>37</sup>

The royalty stacking problem has been cited as one reason that apportionment should be applied to calculate damages in patent infringement litigation.<sup>38</sup> Specifically, it is argued that apportionment is necessary because, when a product is covered by hundreds of patents, simple arithmetic shows that each patent can receive only a small royalty or the profit of the product would be exhausted entirely. However, again apportionment treats the symptom, not the disease. While apportionment can be used to reduce the size of the base to which a royalty rate is applied, apportionment does not address the cause of the royalty stacking problem.

In contrast, the economic approach to calculating reasonable royalty damages has the potential to address royalty stacking issues directly because it explicitly can take into account multiple patent owners making claims on different synergies being generated by different combinations of technologies within the same product.

### *B. Bargaining Between a Manufacturer and More Than One Patent Owner Having a Fundamental Technology*

If a manufacturer is negotiating with multiple patent holders, the economic analysis of licensing negotiations is considerably more complex than the situation in which a single manufacturer is negotiating with a single patent holder. Apportionment is ill-equipped to deal with such complexities. While apportionment attempts to divide up the various sources of profits between the contributing assets under the assumption that the whole is equal to the sum of the parts, determining the economic value of a patented technology requires recognizing and accounting for the synergies between technologies.

We first consider a manufacturer negotiating with multiple patent owners where each of the patent owners holds a fundamental technology.<sup>39</sup> With multiple patent owners, the manufacturer may negotiate simultaneously with each patent holder or sequentially with each patent holder in turn. The equilibrium of a simultaneous

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CEO, Micron Technology, Inc.), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111\\_senate\\_hearings&docid=f:54059.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_senate_hearings&docid=f:54059.pdf).

See also, Mark A. Lemley & Carl Shapiro, Patent Hold-up and Royalty Stacking, 85 Tex. L. Rev. 1991, 2008–2020 (2007) (explaining that because of the threat of an injunction, negotiated royalty rates can exceed the true economic contribution of the patented technology, especially when the value of the patented technology is small relative to the product's total value).

<sup>37</sup> This outcome can result from the negative externalities that exist between owners of complementary patents, whereby each patent owner does not take into account the effects on the others of increasing its royalty. Patent pools are one remedy to this situation in that they internalize the externalities by putting royalty setting under the control of a single entity.

<sup>38</sup> Love, *supra* note 6, at 280–81.

<sup>39</sup> Whether it is appropriate to apply the framework described below to a particular real world situation will depend on the specific facts of the case.



bargaining situation in which one manufacturer and  $N$  patent owners are dividing up the profits of a product where they all hold a blocking position is, generally, an equal split of the profits among the parties.<sup>40</sup> For example, in the case of three players—one manufacturer and two patent holders—the equilibrium is that each player receives one-third of the profits.

At first glance, it may seem that the sequential bargaining game, where the manufacturer negotiates with one patent owner and then another in turn, should lead to a different outcome because the portion of the profits that any one patented technology receives would seem to depend on the order in which the manufacturer values them. To illustrate, suppose a manufacturer wants to produce product AB, which incorporates patented technology A and patented technology B. Suppose both patented technology A and patented technology B are blocking in the sense that product AB cannot exist without both technologies. Consider the situation in which the manufacturer first values patent A and then, second, values patent B. The value of patent A, conditional on not having patent B, is zero because by itself patent A does not allow for production of product AB. The value of having patent B, conditional on already having patent A, is the entire value of product AB. Now consider the situation in which the manufacturer reverses the order: first valuing patent B and then, second, valuing patent A. By reversing the roles, now patent B is valued at zero while patent A is valued at the entire value of Product AB. This apparent paradox is once again the result of synergies being created when the two patented technologies are combined.

An analysis of a sequential bargaining model again suggests how markets would resolve the apparent paradox. Suppose the manufacturer is negotiating with two patent holders, patent holder A and patent holder B, over licenses in order to produce Product AB. The outcome of a sequential move negotiation will generally be the same as the simultaneous negotiation—an equal split of profits among the three parties—as long as the players are equally and sufficiently patient.<sup>41</sup>

This outcome can be explained using the following intuition. Suppose that the manufacturer has previously agreed to a royalty payment of amount  $R$  to patent holder A and is now engaged in negotiations with patent holder B. The total available profits to split between the manufacturer and patent holder B is  $V_{AB} - R$ . Because this is a bilateral negotiation, the equilibrium of the negotiation game is that the two parties will agree on an even split of the available profits (assuming equal and sufficient patience). In other

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<sup>40</sup> While the outcome of the game depends on the bargaining procedure considered in the model, for a range of possible bargaining models, the unique solution is an equal split of profits. See, e.g., Suchan Chae & Jeong-Ae Yang, *The Unique Perfect Equilibrium of an N-Person Bargaining Game*, 28 *Econ. Letters* 221, 221–23 (1988); Suchan Chae & Jeong-Ae Yang, *An N-Person Pure Bargaining Game*, 62 *J. Econ. Theory* 86, 88–96 (1994); Vijay Krishna & Roberto Serrano, *Multilateral Bargaining*, 63 *Rev. Econ. Stud.* 61, 68–76 (1996); and Sang-Chul Suh & Quan Wen, *Multi-Agent Bilateral Bargaining and the Nash Bargaining Solution*, 42 *J. Mathematical Econ.* 61, 70–72 (2006).

<sup>41</sup> See, e.g., Chae & Yang *The Unique*, *supra* note 40, at 221–23; Chae & Yang *An N-Person*, *supra* note 40, at 88–96; Krishna & Serrano, *supra* note 40, at 68–76; Suh & Wen, *supra* note 40, at 70–72.

words, patent holder B will get a royalty of  $(V_{AB} - R)/2$  and the manufacturer will get profits of  $(V_{AB} - R)/2$ .

Now move back in time and consider the earlier negotiation between the manufacturer and patent owner A. The manufacturer will know what will happen in the later negotiation with patent owner B. Specifically, for whatever royalty  $R$  it pays patent owner A, the manufacturer knows that it will end up with  $(V_{AB} - R)/2$ . This means that the “pie” to be divided between the manufacturer and patent owner A is  $R + (V_{AB} - R)/2$ . Assuming equal and sufficient patience, the negotiated royalty  $R$  that splits this pie evenly is  $V_{AB}/3$ . Thus, the three parties each receive an even one-third split of the value of the product, the same as in the simultaneous bargain between the three parties.

*C. Bargaining Between a Manufacturer, One Patent Owner Having a Fundamental Technology, and One Patent Owner Having an Ancillary Technology*

We now compare the situation where a manufacturer is negotiating with two patent holders, one of which has a fundamental technology that is necessary to produce a product and the other of which is an ancillary feature that can be incorporated into the product.<sup>42</sup> The manufacturer has two choices. It can produce product A that only incorporates the fundamental technology, or it can produce product AB that incorporates both the fundamental and ancillary technology. Neither product A nor product AB would exist without the fundamental technology. Moreover, assume that neither product would exist without the participation of the manufacturer.

While it may be tempting to use an apportionment rule to argue that the value of the fundamental technology is  $V_A$ , the value of product A, while the value of the ancillary technology is  $V_{AB} - V_A$ , the difference between the value of product AB and the value of product A, this is incorrect as a matter of economics for two reasons. First, it fails to consider that the manufacturer is blocking for product A. In this example, neither the value of product A nor the value of product AB can be realized without the manufacturer. Second, it fails to consider that the incremental value generated by Product AB over Product A could not be obtained without first having the fundamental technology. Thus, both the manufacturer and the fundamental technology owner can lay claim both to the value of Product A and to the incremental value of Product AB over Product A. The ancillary technology owner, however, can lay claim only to the incremental value. Apportionment rules would fail to reflect the complexities of this situation, potentially understating the value of the fundamental patent as  $V_A$  and overstating the value of the ancillary technology as  $V_{AB} - V_A$ .

The economic approach, in contrast, is based on analyzing the likely outcome of a market-based negotiation among the parties. Assuming equal and sufficient patience, the manufacturer and fundamental technology owner would equally split among themselves

<sup>42</sup> See generally, Richard J. Gilbert, *Antitrust for Patent Pools: A Century of Policy Evolution*, 3 Stan. Tech. L. Rev. 1 (2004), (discussing two-way blocking (both parties own patents with blocking positions) versus one-way blocking (a prior technology blocks the implementation of an improvement patent, but not vice-versa) in the context of patent pools).

the value of product A and would equally split the added benefit of the product AB over product A with the ancillary patent holder. In this situation, the manufacturer and the fundamental technology owner would each receive a value equal to  $\frac{1}{2}V_A + \frac{1}{3}(V_{AB} - V_A)$ , while the ancillary technology owner would receive its split of the incremental value of product AB over product A,  $\frac{1}{3}(V_{AB} - V_A)$ .

#### *D. Incomplete Information Regarding Patent Infringement*

We discussed above the intuition for how a sequential negotiation between a manufacturer and multiple fundamental patent owners could lead to the same outcome as a simultaneous negotiation among the parties. The sequential outcome, however, is predicated on the manufacturer being aware of the existence of the second fundamental patent owner B and accounting for the future royalties it would pay for patent B in its negotiation with patent owner A.<sup>43</sup>

We now consider the outcome if the manufacturer has less than complete information about the patents that might be asserted against its product. Consider the case in which the manufacturer negotiates with patent owner A, before it knows of the existence of patent owner B. As with the previous example, assume both patents are fundamental technologies. Companies that produce complex technologies may reasonably expect that there is some probability that they will face claims of infringement in the future from currently unknown patent owners. The possibility of additional royalty payments in the future is a factor that a manufacturer would take into account when negotiating with patent owner A, and would reduce the maximum royalty that the manufacturer would be willing to pay patent owner A.

Consider, however, the situation in which the manufacturer is completely “surprised” by patent owner B’s assertion of a patent infringing claim. This scenario corresponds to a situation in which apportionment might suggest that the royalty base be limited because the product incorporates many complex technologies and, therefore, royalty stacking issues must limit the royalty that the manufacturer should pay patent holder B. In other words, back when the manufacturer negotiated with patent owner A, it was under the assumption that patent A was the only patent that could be asserted against the manufacturer’s product. In that negotiation, assuming both parties were equally and sufficiently patient, the manufacturer and patent holder A would have split  $V_{AB}$  equally. When patent owner B unexpectedly sues for infringement, the manufacturer has only

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<sup>43</sup> Even if the hypothetical negotiation took place before the negotiation with other patent owners, any patents on which royalties are not currently being paid could, in theory, be taken into account based on the sequential bargaining analysis of the previous section.

$\frac{V_{AB}}{2}$  to split with patent owner B.<sup>44</sup> Thus, after the negotiation with patent owner B, the manufacturer and patent owner B each get  $\frac{V_{AB}}{4}$  while patent owner A gets  $\frac{V_{AB}}{2}$ .

The first thing to note is that the economic approach does, in fact, account for ongoing royalties already being paid on the product, in that the manufacturer pays less to patent owner B than if it was not already paying royalties to patent owner A.<sup>45</sup> Nevertheless, the manufacturer ends up paying too much in royalties relative to the complete information case. Because it is surprised, the manufacturer ends up with only one-quarter of profits, whereas if it had negotiated simultaneously or under complete information, it would have received one-third of the profits. But it should also be noted that the manufacturer does not overpay the second patent owner, since patent holder B receives also receives less than in the complete information case (again, one-quarter rather than one-third). Thus, the effect of royalty stacking in this example is not that the later patent owner is overpaid, but that the manufacturer paid more to the earlier patent owner than it would have in the absence of surprise.<sup>46</sup> Apportionment aimed at limiting plaintiffs' royalties (where the plaintiff is the later patent owner) does not address this issue.

Parties to license agreements have come up with ways to deal with the prospect of paying royalties to unexpected patent holders. For example, agreements may incorporate a royalty adjustment mechanism, whereby the royalty rate is reduced if the licensee later has to pay royalties to other licensors. In the above example, the license with patent holder A would include a provision that royalty payments to patent holder A would be reduced from 50 percent to 33 percent if another patent holder with a fundamental technology later asserts its patents against the manufacturer's product. This contingency clause restores the efficient outcome of a simultaneous negotiation since total profits would again be evenly split between the manufacturer and the blocking patent holders. Such a provision fully mitigates the risk to the manufacturer in this example.<sup>47</sup> Put

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<sup>44</sup> We assume that the manufacturer has no ability to go back and renegotiate with patent owner A.

<sup>45</sup> We assume that the manufacturer is paying ongoing running royalties to patent owner A. Royalty stacking issues can still arise in situations where the manufacturer negotiated lump sum payments with previous patent holders as opposed to running royalties.

<sup>46</sup> This raises questions about the incentives created by damages awards. If earlier patent holders receive a higher portion of the total profits, patent owners in general would have an incentive to make their patents known early, helping to mitigate royalty stacking issues.

<sup>47</sup> When licenses are for ancillary technologies, the analysis becomes more complex. Nevertheless, such contingency clauses can still be included to mitigate the risk of future unknown patent holders.

differently, patent holder A helps “pay” the royalties for the newly asserted patent by reducing the royalties for patent A.<sup>48</sup>

## VI. CONCLUSION

Proponents of apportionment have argued that excessive royalty damages awards can be curtailed by limiting the royalty base upon which royalty damages are awarded. Such apportionment rules, however, would be arbitrary and may under-compensate valuable innovations, particularly when significant synergies exist among technologies. An approach consistent with economic principles would largely eliminate damages in excess of the true economic value of a patent and align damages awards with incentives to innovate.

Even under a proper economic approach, however, other factors may still lead to what some might believe are “excessive” damages awards. Consider, for example, the issue of the time at which a patent is valued under the U.S. law. Under this legal framework, a hypothetical negotiation is assumed to take place between the patent holder and the alleged infringer at the date of first infringement. In certain cases, the infringer may have previously made large sunk cost investments that are specific to the patent at issue, making a switch to a non-infringing alternative relatively more costly. Whether or not the timing of the negotiation results in “excessive” royalty awards presents separate economic and legal questions. Rather than dealing with these factors by attempting to limit royalty awards through arbitrary rules such as apportionment, employing an economic analysis based on the specific facts of the case will provide the greatest flexibility in identifying the true economic value of a patent in infringement cases.

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<sup>48</sup> In this case, before patent holder B shows up, the manufacturer and patent holder A shared 50 percent of future profits. When B shows up, the cost of that license is paid equally by the manufacturer and patent holder A, since the amount of future profits falls from 50 percent to 33 percent for both.

# EXHIBIT G

## Google Inc. GOOG Q3 2010 Earnings Call Transcript

### Executives

- Nikesch Arora : President, Global Sales Operations and Business Development
- Jonathan Rosenberg : SVP, Product Management
- Patrick Pichette : SVP and CFO
- Eric Schmidt : Chairman and CEO
- Jane C. Penner : IR

### Analysts

- Jeetil Patel : Deutsche Bank Securities
- Spencer Wang : Credit Suisse
- Mark Mahaney : Citi
- Douglas Anmuth : Barclays Capital
- James Mitchell : Goldman Sachs
- Jordan Rohan : Stifel Nicolaus
- Imran Khan : JPMorgan
- Jason Helfstein : Oppenheimer & Co
- Marianne Wolk : Susquehanna
- Benjamin Schachter : Macquarie
- Ross Sandler : RBC Capital Markets
- Jason Maynard : Wells Fargo
- Sandeep Aggarwal : Caris & Co
- Youssef Squali : Jefferies
- Justin Post : Merrill Lynch
- Mark May : Needham & Company
- Brian Pitz : UBS

Transcript Call Date 10/14/2010

**Operator:** Good day and welcome everyone to the Google, Inc. Third Quarter 2010 Earnings Conference Call. Today's call is being recorded. At this time, I would like to turn the call over to Ms. Jane Penner, Senior Manager, Investor Relations. Please go ahead, ma'am.

**Jane C. Penner - IR:** Good afternoon, everyone, and welcome to today's third quarter 2010 earnings conference call. With us are Patrick Pichette, Chief Financial Officer; Jonathan Rosenberg, Senior Vice President, Product Management and Nikesch Arora, President, Global Sales Operations and Business Development.

First, Jonathan and Patrick will provide us with their thoughts on the quarter. Then Nikesch will join Patrick and Jonathan to answer your questions. Also, as you know, we recently began distributing our earnings release exclusively through our Investor Relations website located at [investor.google.com](http://investor.google.com). So, please refer to our IR website for earnings releases as well as supplementary slides that accompany the call. This call is also being webcast from [investor.google.com](http://investor.google.com). A replay of the call will be available on our website in a few hours.

Now, let me quickly cover the Safe Harbor. Some of the statements we make today may be considered forward-looking, including statements regarding Google's future and investments in our long-term growth and innovation, the expected



performance of our business and our expected level of capital expenditures. These statements involve a number of risks and uncertainties that could cause actual results to differ materially. Please note that these forward-looking statements reflect our opinions only as of the date of this presentation and we undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements in light of new information or future events.

Please refer to our SEC filings for a more detailed description of the risk factors that may affect our results. Please note that certain financial measures we use on this call, such as operating income and operating margin are also expressed on a non-GAAP basis and have been adjusted to exclude charges relating to stock-based compensation.

We have also adjusted our net cash provided by operating activities to remove capital expenditures, which we refer to as free cash flow. Our GAAP results and reconciliations of non-GAAP to GAAP measures can be found in our earnings press release.

With that, I will now turn the call over to Patrick.

**Patrick Pichette - SVP and CFO:** Thank you, Jane. Good afternoon, everyone and thank you for joining us. As Jane mentioned, Jonathan and I will begin with our prepared remarks and then Nikesh will join us for Q&A.

In addition, and as bit of a surprise, we may actually have Eric join us for first 30 minutes of Q&A before he has to run to a plane. So, let me start by giving you some general thoughts before I get into the details of our financial performance for Q3.

At the highest level, we're very pleased with our Q3 results and it's clear that the digital economy continues to grow rapidly, a relentless trend that continues to drive continued growth in both our core business, core search, and creating market, and also for fueling momentum in our newer businesses.

Our Q3 results clearly reflect this phenomenon; that is our continued strong growth in our core business and continued very strong growth in our emerging businesses year-over-year, and indeed, we saw strength in every major product area in Q3, that is search, display, mobile as well as apps enterprise.

When I say our newer businesses are seeing great momentum, I really mean it and in that, Jonathan will back that statement up with some hard facts in a few minutes. So, stay tuned for the details.

Now, let's turn to specific of our performance in the quarter from a financial perspective. Let's move quickly through the results. Gross revenue grew 23% year-over-year to \$7.3 billion. Our Google website revenue was up 22% year-over-year to \$4.8 billion, with strength as I mentioned, across most major geographies and verticals. Our AdSense revenue was up 22% year-over-year to \$2.2 billion, again reflecting continued strength in our Google Display Network.

Our other revenue was up 35% year-over-year to \$254 million, down sequentially reflecting the end of our direct-to-consumer sale of the Nexus One. Our global aggregate paid click growth remained healthy, up 16% year-over-year and also up



4% quarter-over-quarter. Aggregate cost per click growth was up 3% year-over-year and 2% quarter-over-quarter. You should note that the FX had a negative impact on CPC growth year-over-year, but the impact for quarter-over-quarter was quite neutral. Remember too, that this is an aggregate number which includes both Google.com and our AdSense properties.

So, now turning to our geographic performance; the U.S. and rest of world are growing at a healthy pace as our results reflect, but also while the U.K. continues to lag a little bit in the economic recovery, again seen in our results. Revenue from the U.S. was up 26% year-over-year to \$3.5 billion. In our earnings slide, which you can find in our Investor Relations website, you'll see that we have broken down our revenue by U.S., U.K. and rest of world to show you the impact of FX and the benefits from our hedging programs. So, please refer to those slides for the exact calculations.

International revenues accounted for 52% of our total revenue or \$2.8 billion, up 20% year-over-year, which includes \$89 million benefit from our hedging programs, and that compares to \$39 million benefit for Q3 of last year. If we used fixed exchange rates, our international revenues would have been roughly \$169 million higher year-over-year. The U.K. was up 10% year-over-year to \$840 million, but actually if using a fixed exchange rate that number would have been just shy of 20%.

So, now let me now turn to expenses. Our traffic acquisition costs were \$1.8 billion or 26% of total advertising revenue for this quarter. Other cost of revenue was \$747 million including stock-based compensation of \$8 million, and finally all other operating expenses totaled \$2.2 billion, including approximately \$372 million of stock-based compensation.

The increase year-over-year in OpEx was primarily due to increase in payroll, professional services and advertising and promotional spend. So, as a result of all this, our non-GAAP operating profit, which excludes the stock-based compensation increased to \$2.9 billion in Q3, resulting in our non-GAAP operating margin of 40.2%, essentially the same as last year.

Headcount was up approximately 1,500 versus Q2 and we ended the quarter with approximately 23,300 full-time employees of which about 300 came from acquisition.

Our effective tax rate for the quarter was 20%, down from 24% in Q2, and this is mostly because we released certain tax reserves as a result of the settlement of our 2005-2006 tax audits, which are now completed.

Let me now turn to cash management. In the line other income and expenses, it was \$167 million for Q3, which includes good progress on our portfolio management performance, although that was slightly offset by the impact of our hedging expenses associated with FASB 133. For more details on OI&E, again please refer to the slides that accompany this call on our Investor website.

Operating cash flow, very strong for the quarter at \$2.9 billion; CapEx for the quarter was \$757 million. Again, mostly primarily related to our data center operations and as a reminder, we continue to make significant investment in CapEx, and these have shown to be quite lumpy from quarter-to-quarter depending

on when we're able to make these investments.

So in the end, free cash flow was also very good at \$2.1 billion.

Before I close, I want to say a few words about how we're continuing to grow the business for the long term. When I say the long term, we really mean not the next quarter and the following quarter, but we're thinking about the next 5 to 10 years.

Looking ahead, we continue to see tremendous opportunity in our agenda in both our core and in our emerging businesses. So simply put, we're on this growth agenda at full throttle. We're doing it largely in two ways, to think about it; continuing to invest heavily in people and also in product.

In people, it's pretty simple story, the explosive growth in the digital economy that we're experiencing it's really created a war for talent in our industry, the digital economy and one that is quite out of sync with what's happening in the rest of the economy.

So we believe this trend is only accelerated in the next 18 months and will continue to accelerate. So, in context of that, we stepped up our hiring machine and we are currently exploring how we can continue to attract and retain the very best people in this exceptionally competitive environment.

So we strongly believe that the difference between the winners and the losers in our industry, while they'll be to a large extent determined by who we can attract and who we can retain the best talent. So, to that end, we are incredibly proud to have attracted approximately 1,500 people to join Google in Q3, the majority in engineering and sales once again.

On the product side, our goal continues to be to develop truly innovative products that leverage computer science to solve these incredible problems that we tackle and offer, obviously, significant ROI across a number of very large growth opportunities.

As I mentioned, Jonathan, in a few minutes, will be speaking of this great momentum our products are experiencing and as always, we're investing with discipline following the Google tradition of being generous, but frugal.

So, in summary, very pleased with our performance of Q3 across revenue, margins, cash flow, and we plan to continue to attract higher, retain the very best talent in the world wherever they are to fuel our innovation agenda.

Now is the moment for me to turn the call over to Jonathan, which I usually means that my number parts is over, but today I've actually asked Jonathan to share with you and let me emphasize on a one-time basis a few product-specific metrics that I think everybody will be very interested to hear. As a CFO, you know as I'm usually the official buzz killer, so I need to make it very clear that we will not be updating these numbers going forward, we are merely sharing them with you as a proof point of the great momentum we are experiencing in our emerging businesses.

With that, let me turn it to Jonathan.

**Jonathan Rosenberg - SVP, Product Management:** Well, thanks Patrick. So I think you guys can see from the financial numbers. We've got tremendous

momentum in the core business but in these emerging businesses, you guys basically have to invoke your Jedi guesstimation skills to try to figure out what's going on. So, today with Patrick's permission, I hope to shed a bit more light on these businesses with some numbers that we've not shared before, but let me start with the core.

Search is more important than ever. The Internet, as you guys know, continues to explode. There's lot more websites, there's more videos, there's more images, there's more books and news, all this stuff is coming online. At the same time, more people are coming online too, and what did these people do when they get online?

The first thing they usually do is search. So, search is still at the heart of the web, and with all of this new content coming online, doing search well is even harder than ever. I actually believe search remains one of the most challenging computer science problems of our generation and probably the next one as well. This is why we're so incredibly proud of Google Instant.

Many of you guys speculated that we launched Instant to make more money. Well, let me tell you that's simply not the case. We launched Instant because it's so much better for the user. In fact, from a revenue standpoint, its impact has been very minimal and from a resource standpoint it's actually pretty expensive.

So why did we do it? Well, we believe from a user standpoint, Instant is outstanding, and the data that we're seeing actually bares this out. We took something that no one thought was a problem, and we created something that once you use it you can't recall how you lived without it before. It saves about two to five seconds per search and users absolutely love it. The percentage of people who select Instant results before they finish their query is steadily rising. So, in other words, that means the more they use it, the more they like it.

So, let me be clear that Instant wasn't based on a narrow financial calculation. We launched it because we could and because it's great for our users as we've always said. Of course, I know it's an earnings call, so let me be clear on another point. We do, in fact, care about money. Search is still the most monetizable moment on the web, and as search gets better, our ads have to keep pace. The good news is they are.

It turns out, we also have a lot of great momentum with AdWords and this is particularly true with the new ad formats. On past calls, I've talked about making ads more useful with the new formats like Sitelinks, and ads with the seller ratings and product listing ads, which we could see now are starting to have a real impact.

These ads appear on the more than 10% of the queries where we show ads and people like them. We see this because click through rates are up for some formats as much as 10% and up more than 30% on some others.

We're also seeing great momentum in our newer businesses, and this is where Patrick is letting me give you some big numbers. So, I hope you'll find them useful. The numbers all begin with the letter B, and remember as I often remind my team at Google, a billion is a thousand million.

So, the first big number, \$2.5 billion as in display is on annualized run rate of over

\$2.5 billion. So, that's non-text display, meaning it doesn't count text ads running on our network. What it does count is YouTube ads, non-text ads on the Google Display Network and of course, on the DoubleClick platform.

So, you guys often ask me, Jonathan where's the next multi-billion dollar business after search? There's your answer. Its display and it's already here clocking in at over \$2.5 billion run rate. So, clearly we're firing on all cylinders in display. The advertisers are running great branding campaigns. The Ad Exchange is taking off. We're partnering very well with the agencies and of course, more publishers are making more money.

If you want to know more on the display front, Nikeshe who is here, is passionate about this business. He has made enormous strides with the sales force and clients, which I am sure, he'll be happy to talk to you guys about in the Q&A.

So, second big number, 2 billion as in YouTube, is monetizing over 2 billion views per week, that's up over 50% year-over-year and when you think about that growth, it's important because the RPMs are really strong on YouTube.

We've just launched some new ad formats called TruView, where the viewers get to choose which commercials to watch or they can even skip watching the ad all together. It turns out when advertisers only paid for the commercials people watch, we discover the ads are a lot more valuable to advertisers, when they are only paying for viewers who have actually chosen to watch them.

Finally, they are big number, 1 billion. Mobile is on an annualized run rate of over \$1 billion. This means that people who are accessing our products and services through their mobile phones are adding a \$1 billion annually to our existing revenue streams. Clearly, this is the future of search in the Internet, more people in more countries, coming on line from these smartphones.

Our mobile search queries have grown five times over the past couple of years and of course, a lot more of those queries are now coming from Android phones. So they are the facts that Patrick has let me say just this once; non-text display \$2.5 billion run rate, YouTube, 2 billion monetized views per week; and Mobile, over \$1 billion added to our business.

Patrick, maybe, I'll ad-lib on one more fact here without asking you, you should know, all these businesses are growing. So, I hope this gives all of you a sense of why we're so excited about the incredible emerging businesses at Google.

With that, I'll take it back to Patrick.

**Patrick Pichette - SVP and CFO:** Thank you Jonathan, before we take your questions, I just want to add one fact regarding the new disclosures, Jonathan, just gave you. Obviously, this information reflects our revenues from two different angles of our business. With it, we've recognized in some cases, some small overlaps.

So, for example, the AdMob revenues are obviously, included both in the Mobile number, because it's a mobile product and in Display, because it's also a display product. So, these are very small, but I wish to just clarify it out for everybody.

So, with that in mind, what I like to do is turn it over to Connie to open and we

have Eric with us, so, the 'may' is now in actual, Eric is with us, he's got 20 to 30 minutes, then he is running for a plane. So, delighted to have you with us, Eric, and what I'll do is, I'll turn it to Connie for the Q&A questions period. Thank you.

Transcript Call Date 10/14/2010

**Operator:** James Mitchell, Goldman Sachs.

**James Mitchell - Goldman Sachs:** I'll ask three separate questions if I may. First one, if I look at your paid-lead growth, it's been remarkably consistent and not decelerating, I think it was 4% sequentially in the third quarter of 2008, 4% sequentially in the third quarter of 2009, and then 4% sequentially in the third quarter of 2010. Is that because your query growth is also fairly consistent, or are you supplementing query growth with monetization initiatives that increased paid-lead take up? Secondly and separately, thank you extremely much for disclosing the billions in terms of Mobile and Display advertising. But within the 2.5 billion plus of display advertising, how do you account for advertisers spending through the DoubleClick Ad Exchange, is that on a gross or net basis?

**Jonathan Rosenberg - SVP, Product Management:** I'll try to take the first question. Certainly the highest correlation between ad clicks and anything else is query growth. So, that's going to certainly by far dwarf any other factor. I think the other factors that we are seeing is that, the new formats that we have which I'd mentioned, certainly drive click growth as well, and I mentioned that those formats appear on 10% of the queries. If you try some of those like, Halloween costumes, you will see that they make the ads much more compelling, as do things like, merchant ratings, if you type in laser printers. So, by improving the ad formats we are increasing the relative number of clicks, because the clickthrough rates go up.

**Patrick Pichette - SVP and CFO:** On the other one, the Ad Exchanges included in. So, if you think of the elements, the Ad Exchanges, the DoubleClick platforms, so, all these are included in Display and it's done on gross basis.

**Operator:** Spencer Wang, Credit Suisse.

**Spencer Wang - Credit Suisse:** I guess since you guys are sharing some numbers this time, I was just wondering if we could just delve into the YouTube numbers a little bit. Of the 2 billion views, Jonathan, I was wondering, roughly what percentage of total views is that currently? Then you guys have talked in the past about getting closer and closer to profitability, I was wondering if you could just give us a sense of where you are with respect to profitability as well?

**Patrick Pichette - SVP and CFO:** So on profitability, let me jump on that one first which is, we have not made any comments on it. You will remember we talked about it a long time ago, because there was so much distortion in the market, we just thought it was okay to set the clocks properly, but since then, we have not and we'll not comment on it. On the billions...

**Jonathan Rosenberg - SVP, Product Management:** So there is basically two points that we've given that you can use to connect those dots. We've said that traffic that we have over 24 hours of video uploaded every minute and over 2 billion views per day. When you couple that with the 2 million monetized views per week, I think you can get to the answer that you are looking for.

**Operator:** Imran Khan, JPMorgan.

**Imran Khan - JPMorgan:** So I have a question for Eric, as he is on the call and then I'll follow-up housekeeping question. So, Eric, I think the two big trends on the Internet, obviously the web is becoming more social and real time, so as the web becomes more social and real time, how does Google compete in that world in terms of real-time search market and how does that impact your business? Secondly on the mobile trend, obviously, you have this Apple ecosystem with Apple applications and people are going directly to applications and how does that impact Google's business model over the long term? The housekeeping question, near-term question, the tax rate was 20% on the quarter, is there anything specific in this quarter? How should we think about the tax rate?

**Eric Schmidt - Chairman and CEO:** With respect to social and real time, we use complex signals to do ranking and over time, we will add additional social, if you will, ranking clues. Fundamentally, we want to make search more personal and as we get more information about who your friends are, we can make the search that much better. We are quite convinced that that produces better search results for people who choose to give us that information. For people, who want to continue to do what is generally known as anonymous search, that's also possible. To one of the ways to think about that is that we want users to be more logged into to Google, the more logged in they are, more likely we are going to buy them, not only the social problem but the other information. You also asked about real time, we already have significant feeds from real-time information providers. We have real-time index, which of course, is very successful for us and you could see that whenever anything interesting happens, it is already right there at Google. For example, we use Twitter as a real time source of information. So if you search for almost anything, you will see that Twitter feeds now is part of universal search. Could you repeat the second part of your question for me?

**Imran Khan - JPMorgan:** Second one was, Eric, on the mobile front, right. We are seeing explosion on application on mobile platforms, so does that impact your search volume as people go directly to the vendors through the app? This seems like Amazon talked about \$1 billion sell through coming from mobile devices, how does that impact Google's business long-term?

**Eric Schmidt - Chairman and CEO:** Doesn't seem to. This is one of those sort of worry word questions that we get all the time, that the success of one thing could that impinge on something else and in fact, the rising tide lifts and all those. I would say that again, what I hear is this sort of presumption that it's a zero-sum game and that one wins and another one loses. What's really happening is that all of the companies that are driving the web and web applications are all doing really well. People are moving from offline to online and in the course of doing that they are using these systems more. They are searching more, using apps more, et cetera. Now, from our perspective, you have this phenomenal success of Android, which is well past anything that I had ever hoped for, and looks like it's on its way to being a huge, huge success with a number of partners, number of devices, an open model for access, lots and lots of innovation, more dynamic, more competition than any other part of the platform. There are up to 90,000 applications on Android growing very, very fast. Those applications, of course, have search services inside of them. So, we don't see them as a negative, we see both as very strongly



positive.

**Patrick Pichette - SVP and CFO:** Let me go back then to Imran to the tax question. We did get a one-time benefit this quarter on the tax side and it is related. As the statutes expire for 2005 and 2006, all of our taxes are now closed and in doing so then we had an opportunity to reverse a set of provisions we had taken that we ultimately didn't have to take. So, you can see the tax rate this quarter is bit of anomaly again.

**Operator:** Justin Post, Merrill Lynch.

**Justin Post - Merrill Lynch:** Just when you think about Android as an operating system, how does that proprietary to Google when you think about your search services. Does that give you an advantage over other phones for some of your services and does the phone operate better when you are using Google Services? Second, I think you were quoted in a article saying, maybe someday Google can make \$10 per phone, would you see that as mostly advertising and is that number right, something you did say?

**Eric Schmidt - Chairman and CEO:** The latter when I made out of thin air. So, we don't really have a notion of exactly what it is, but it's probably pretty big. So one way to think about Android is that it's probably the largest single platform play available in the market today, because it's a platform for computation for location, for everything that you could do with the new and most popular set of computing devices that are emerging. That market is larger than the PC market, and the Tablet market is a small component of it, but an important part of it. So if you think as Mobile as platform as phone plus Tablet plus all the other things, we hope to become the leading platform in that space, and we are doing it with open source approach. So, in the open source approach that means, we give the software away, which is always paradoxical, people say how do you make money from that. Well let's start with the fact that

the evidence we have is that the people who use Android, search twice as much as everything else. So, clearly there is more revenue associated with those searches. Other thing, of course, is if they are using Android systems, the revenue that we share and the searches are shared with the operator, but not with anybody else. So, again, it's more lucrative

So, not only is there more searches, and there's more ads, but it's also more lucrative. So, on that basis alone, Android is hugely profitable and we maintain the anti-fragmentation and other things by a series of contracts around their store and so forth and so on. So, Android is likely be financially successful to Google, without even any of the applications that are possible. So, Patrick calls up and says, okay, what else can you do for us, and the answer, of course, is that we can layer on value-added service, is usually how you get to the \$10 and the value-added services could be of any kind. Our primary purpose right now is building this open platform. Google had chose to make it that on open systems and open platforms and open web; that served us well so far and it looks like it is going to work really well on Android.

**Operator:** Mark Mahaney, Citigroup.

**Mark Mahaney - Citi:** Two questions, sequentially, is there something that you have been able to put in place that gives you confidence that that will continue going forward? Just on the Mobile revenue opportunity, are the results strong enough from your perspective in terms of dollars and growth such that you'll stay

with an indirect monetization approach towards Android or are you going to keep the door open and potentially charge per operating system as a share of applications in the future?

**Patrick Pichette - SVP and CFO:** On cost per employee look, its just another reflection of, I wouldn't read anything kind of forward-looking into our results, except that, its just another good example of how we are I have talked earlier about generous but frugal, we're investing, but people shouldn't confuse the fact that we're investing and we're investing aggressively where we really see fantastic opportunities from being wasteful. We're just not a wasteful company, and so in that sense, it does look as a good signal and we'll continue to do so. On the Mobile, maybe Jonathan or Nikesh can give us a indication of it?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I think just following up on what Eric said earlier, we are very, very keen to build this Ecosystem and I think Jonathan's disclosure on the fact that we're on \$1 billion run rate in Mobile, is testament to the fact that, now we have a revenue model, which we are very excited about, and that revenue model sort of proves to us that, roughly the revenues are split between our search efforts, our display efforts and our application efforts. We are able to play across all those three spaces with our mobile monetization efforts, and the more people who use smartphones, the more people who are able to access (throughout) on their devices, the more we see the trend that people are going to search in them, they're going to give us opportunities to put display advertising on them. So, we see no reason to change our monetization model. We think the current approach to Android drives more users and more as usage and drives the Ecosystem.

**Patrick Pichette - SVP and CFO:** Nikesh, I think you've argued that display will become a very large component of the mobile revenue, because of the success that we're seeing in our mobile users and the hockey stick they are in.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** Exactly.

**Operator:** Douglas Anmuth, Barclays Capital.

**Douglas Anmuth - Barclays Capital:** Two things, first on Display. Can you give us some context in terms of breaking out YouTube AdSense for content in the Ad Exchange? Secondly, what's your view on other potentially competitive Android app stores that are out there?

**Patrick Pichette - SVP and CFO:** So, I'll answer the first and then I'll give Jonathan to talk about the Android marketplaces. So, on Display, we just don't break it down. So, we will not give the details. What we wanted to give today with the numbers we're sharing is a sense of scale and trajectory, and that's really what we wanted to share. So, we unfortunately won't give any more details on that. On the Android competitive stores, Eric, maybe you can give us more perspective on it?

**Eric Schmidt - Chairman and CEO:** The goal of the stores is to make money for the people who are writing the software in their applications, and it's not a revenue goal for Google. So, there certainly will be multiple stores, they will certainly be the key one from us, and we think it's a net win for everybody, but it's not a



primary focus from Google from a revenue perspective. It's really for the developers.

**Operator:** Brian Pitz, UBS.

**Brian Pitz - UBS:** Would you provide us with a relative idea of how the difference between average CPCs and clicker rates are basically on mobile versus the PC, now that you have a large enough number of devices in the market? Secondly, if there is a gap which I imagine there is, can you close that gap longer term between the two?

**Jonathan Rosenberg - SVP, Product Management:** Nikesh, can maybe give you more of a customer-based perspective. I think that some of you know we've recently started smart pricing on the mobile devices, and it is the case that the CPCs on the mobile devices are good bit lower. It's primarily because there isn't the measurement, there isn't as much of consummation of a transaction on the mobile devices. People don't have their credit cards in them. It's harder to type into them. So the mobile rates remain relatively lower. As payment platforms get built into the mobile devices and as people are more likely to actually complete the transaction, I think you'll see those things go up substantially. I think it's also the case that on devices like the iPad, the kind of activity looks a little bit more like it does on a PC, primarily because people have a larger window, a bigger browser and they are also more able to input information. Nikesh?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I think the only thing I have to add to that is there are some formats, which we started to introduce, which are driving a better monetization on the mobile sites, formats like Click to Call and hyper-local, because people are searching in their mobile devices where they want to then make a phone call or they are searching on their devices when they are looking for something in a very local context and there we're beginning to see sort of better CPMs and better monetization. Generally, we think that's where the trend is, that's where we're going to see more and more monetization, and clearly, we are seeing monetization in the application side of the mobile, because with the AdMob sort of team that we have and all the advertisers who want to be part of the application, the applications are becoming a big share of people's mobile usage.

**Operator:** Ross Sandler, RBC Capital Markets.

**Ross Sandler - RBC Capital Markets:** There are two quick questions. First is, you guys have discussed the cannibalization topic before between smartphone and PC, but when you look at the search data, can you see whether tablet searches or iPad searches are incremental or are there any cannibalization towards PC and is the tablet option within AdWords going to be similar to the desktop laptop option or is it going to be kind of a separate category? Then the cash, can you just give us a little bit more color on the rest of world growth, just in terms of regions that we're driving that 26%. Was it broad-based or was there anything that stood out?

**Jonathan Rosenberg - SVP, Product Management:** So we don't see cannibalization. We tend to see mobile is very complementary to the desktop. I think you do see some differences in the search patterns. People use mobile at lunch. They use it in the evening. They use it on weekends. They use it more on

holidays, but we see more mobile and web search traffic growing and they appear to us to be complementary and not cannibalizing each other.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** The U.S. growth was very good for us. I'm very pleased the way our U.S. team has driven the revenues sort of across the board, across our revenue categories. On the international side, I'd say generally, the trend has been positive across the board. I know the U.K. has been a bit weaker, but there is a bit of currency in there as well. But France, Germany, and those markets have actually been very, very robust. I'd say Southern Europe has done way better than some of the Northern European countries, but that's expected because they are enjoying (similar) growth curve, and clearly some of the Asian markets are growing robustly for us. So good growth across the board.

**Operator:** Jeetil Patel, Deutsche Bank Securities.

**Jeetil Patel - Deutsche Bank Securities:** A couple of questions. I guess you're on a pace of doing about \$30 billion or on gross revenue run rate. I guess maybe a different way to look at your business. But since it's an ROI-driven model, I guess can you quantify or give us a sense of what kind of gross dollar value of transactions that entails for all the merchants and customers that are participating in the system? Second, I guess if you look at your competition in mobile or in other company in this space in mobile, they make about \$300 in operating profit per handset sold. I guess, do you think this is more the upper bound as it relates to lifetime profit for handset? Do you think it can be higher? I know obviously you're going after a different strategy, but where do you think is the upper-bound in terms of the profit potential on a let's say, to your handset in terms of monetization?

**Patrick Pichette - SVP and CFO:** On the gross value, rather than to try to give you more details on this call, Google has actually published some economic data about the amount of value that is actually transacted across the system, and so, I may just refer you back to the IR team that can actually dig that out, because we actually shared that with the public over the last kind of eight months or six months, and it's actually very detailed into how much economic is actually flowing to our systems.

**Eric Schmidt - Chairman and CEO:** On the handset question, which you asked, I understand the question that you are asking. Our model, remember is that the handset manufacturer is in the operators are going to make a lot of that money. Our model is that, our operating system is free and that we're going to make money from advertising and value-added services on top of the Android platform. So, it's clearly different model. So, it's not very difficult to compare the two, they are really apples and oranges. It would be I think premature for us to estimate what that would be, but if you assume that search monetization on handsets will become equivalent to PCs and then eventually exceed it, which is my personal view, then it should be highly lucrative, because those customers are using Google services, they are going use it more because they are more personal and more targeted. So, ultimately it should be a very, very strong revenue stream compared to a PC.

**Operator:** Jason Maynard, Wells Fargo.

**Jason Maynard - Wells Fargo:** Actually I had a question about social search. I am just curious about how do you capture the signal from social networks, without a relationship like you have with Twitter, where you can actually get fairly easy access to the data feeds?

**Eric Schmidt - Chairman and CEO:** One of things we're careful about is not to describe how our signals are actually assembled, but the answer is that there are some ways in which we can do that. We also have in development other ways in which people can give us that sort of information that can make it even more personal.

**Jason Maynard - Wells Fargo:** Then just maybe a follow-up for Nikeshe. When you think about mobile advertising, maybe just sort of help me frame, where do you think advertisers are at in their lifecycle of actually committing dollars to spend in this medium inform factor?

**Nikeshe Arora - President, Global Sales Operations and Business**

**Development:** I think the important part to understand on the mobile space is that the reason the \$1 billion dollar number is an interesting number that just means that now the larger advertisers can get more interested, because we can help them spend reasonable amounts of money. It's very hard to go and make a pitch to a large advertiser when the maximum inventory that you can offer them is in the five to ten or \$50,000 range, especially, with advertisers who got \$100 million or \$200 million advertising budgets. So, to get them interested, if they get interested, they'd like to be able to deploy reasonable amounts of money against this market. So, the part I am excited about is that the inventory continues to grow. That is diversity in formats. People are interested in search-based advertising. People are interested in display-based advertising. They want to be in the middle of applications and get customer engagement. So, we are seeing sort of reasonable broad-based interest. Clearly, the early adopters are people who can actually consummate a transaction, so, insurance services want a click to call, they want to be able to pitch, they want the customer to be able to pick up the phone and call them. There are now people who are in the local space, who want the customer to come to their restaurant. They want the customer to come show up, where they are offering a local service. So, that interest is going up. Now the retailers who actually are interested when you're looking for a local JCPenney or RadioShack that, if we can tell you where it is and they can actually click and find out where it is. So, the interest continues to grow as you look at the local categories, as you look at the click-to-call categories, and as Jonathan said, as payment capabilities start getting bills into the phone, you'll start seeing even more of an interest from the e-commerce players.

**Jonathan Rosenberg - SVP, Product Management:** By the way, this is Jonathan. Try typing in some things that will generate the hyper-local feature that we have on mobile search ads. If you try for example, typing in car rental, there is a very good chance you'll see an enterprise rent-a-car ad that tells you how far away it is to your nearest location. Half a mile along with the phone number and a link to a map, and I think that will give you a sense of how powerful it is.

**Operator:** Jason Helfstein, Oppenheimer & Co.

**Jason Helfstein - Oppenheimer & Co:** One of the questions that investor's

continue to have, is ultimately what's the right long-term growth we have to think about for international. Prior to the recession, the Company was obviously putting up a very large international growth rate, and we've seen a slowdown and now we're rebound. Is there additional color you can give us as far as you think about the long-term opportunities, what they are in the more developing countries and how that's impacting your results internationally?

**Patrick Pichette - SVP and CFO:** Because it's forward-looking guidance, we just can't comment. I think that you have to take it from the current performance that you see over the last couple of quarters that there is clearly a separation in the world of economic growth in general and the digital economy growth, and from that I mean, you have to infer that that's why we're so optimistic about the future of international, and we're investing so much in it.

**Operator:** Youssef Squali, Jefferies.

**Youssef Squali - Jefferies:** Two quick questions. First, Patrick, your Traffic Acquisition Cost rate seems to be the lowest you had, I think since IPO. What accounted for that and is that sustainable going forward? Two, growth in the last few quarters was driven largely by volume, not price. So, to what extent is that driven by more SEO, less SEM, maybe a mix of domestic versus international? How realistic is it for us to kind of expect, kind of hockey stick or maybe not hockey stick, but a reacceleration in pricing trends?

**Patrick Pichette - SVP and CFO:** So, I'll take the first question, and then on pricing, Jonathan can probably give you some perspective. On the TAC it's very simple, I mean this quarter we've had two really factors. One is, our MySpace deal is now over and then with it, there was a contract with minimum guarantees that now has expired. So that's one (all meant and done). The second one is simply the mix of our partners within the network, actually will affect our TAC, and that's really the effect that you see for this quarter, there is nothing more of us. In terms of forward looking for volume versus price, Jonathan any insights or...?

**Jonathan Rosenberg - SVP, Product Management:** I am not really sure how to answer the question without saying anything forward-looking, so is there anything specific use of in terms of trends that you've seen that you are asking for clarification on?

**Youssef Squali - Jefferies:** We've been hearing from agencies and advertisers there that they are spending more on SEO. They are getting smarter about how to spend their ad dollars. So to the extent that that continues and that really is putting a dampening effect on CPC growth going forward. The mix between domestic and international should shift to more international and that over time we should see higher CPCs. I am just trying to kind of see as we look at the business over the next several years how realistic is it to assume that one, i.e., that increased international CPCs will offset the SEO trend?

**Jonathan Rosenberg - SVP, Product Management:** I guess I don't actually agree that I've necessarily seen such a trend in terms of more SEO versus SEM. As far as I can tell, SEO has always been pretty big. Pricing has been pretty healthy from my perspective coming out of the recession, bids are healthy. We've got very strong conversion rates and presumably that's because the advertisers are seeing

buyers again. The advertisers look at the total value they get from Google, and they are optimizing across everything under their purview. So I am not necessarily sure I agree with the trends they way you have stated them.

**Eric Schmidt - Chairman and CEO:** The other thing that's going on is we're continuing to make algorithmic improvements to our ad targeting, which is flow through the system as the inventions are brought out. We've brought out hundreds of them, in the quarter the small ones, but some of them is actually helping drive basically the revenue performance in a per query basis.

**Operator:** Ben Schachter, Macquarie.

**Benjamin Schachter - Macquarie:** A few years ago, there was a lot of discussion around fallible exclusive data or databases and while yesterday's deal with Microsoft and Facebook was not exclusive, I wonder if you think that's going to be a topic that may become more of an issue going forward, particularly with Microsoft and then also just quickly, a lot of discussion lately around daily deals and private sales and those kind of things, can Google participate in that any way?

**Patrick Pichette - SVP and CFO:** In general, the web continues to grow at such a blazing pace that if you think of all the signals available I mean, there are anyone that will be private is completely swamped in the sea of the Internet and in that sense. It's not really a relevant question if you can think of the, what Jonathan would call it petabyte or terabytes or exabytes, so from that perspective I think that we continue to organize the vastness of this and that's where most of the value comes from. So I think that we're concerned on that sense.

**Eric Schmidt - Chairman and CEO:** There's always a concern that large private collections of a data are not accessible to web search engines. We have teams that is going awful lot of time trying to make sure people know that they if they optimize (indiscernible) we have sitemaps and other services which are standardizing on the web search industry. So it's obviously up to the content owner to decide how much of that information to expose, but we've taken the position both in religious and a business perspective that the world is better off if you take information that you are assembling and making it searchable. It provides a larger audience. It drives more traffic to your site, et cetera, et cetera. We fundamentally believe that. Jonathan, you want to take the second?

**Jonathan Rosenberg - SVP, Product Management:** There' no question, Ben, there is very exciting space related to daily deals which we're seeing and there is obviously a lot of small companies that are doing a fabulous job there. We do participate in it. To some degree, there are some companies that use Sitelinks for hot deals. So, there is a mechanism that we already have, where advertisers are actually putting in today's deals and highlighting them. But there is no question, that's a very exciting and hot space, and there are a lot of innovative players, buildings and pretty effective business models there right now.

**Operator:** Jordan Rohan, Stifel Nicolaus.

**Jordan Rohan - Stifel Nicolaus:** Couple of follow-up questions on Mobile while we're on this subject. I am a big fan of Google Instant, wondering when it'll be fully rolled out on BlackBerry, iPhone and other devices there. Also curious, if you happen to disclose the number of Android devices activated in the quarter, I think

last quarter it was around 200,000 a day? Finally, instead of smart-pricing and sort of obscuring the discount placed on mobile search, clicks or calls, why not let advertisers just bid directly on the mobile search inventory, you might be surprised about the yield?

**Patrick Pichette - SVP and CFO:** So, let me on Instant, Jonathan, when is Instant available for all these mobile devices?

**Jonathan Rosenberg - SVP, Product Management:** It's relatively soon. Sometime this fall, the fall lasts a little longer in California though.

**Patrick Pichette - SVP and CFO:** Last public number is 200,000 handsets activated a day, and that's the last number that we've been using, so we stick to that one for now. Can you just repeat, Jordan, your last question for me?

**Jordan Rohan - Stifel Nicolaus:** Smart-pricing is, as I understand and maybe I'm getting it wrong, but Google has an algorithm which discounts the value assigned to advertisers that, which advertiser have to pay for certain clicks, if it's believed that those clicks perhaps are less frequently tied to conversions?

**Patrick Pichette - SVP and CFO:** Yeah, they can set up a separate campaign now. So, the smart-pricing is a convenient mechanism for them, if they want to leverage the existing campaign across mobile. But many advertisers have increasingly setup separate campaigns for mobile.

**Jordan Rohan - Stifel Nicolaus:** They get right now full visibility there, so that's how you at some level inform your decisions about smart-pricing for the rest of the universe like that accesses is the inventory...?

**Jonathan Rosenberg - SVP, Product Management:** I'm not sure that's no, the smart-pricing is done algorithmically on the basis of what we see, we're not doing it. We don't necessarily look at differentiation between specific bids across different campaigns.

**Operator:** Sandeep Aggarwal, Caris & Co.

**Sandeep Aggarwal - Caris & Co:** Actually I have two questions. One is Eric, given that non-core search business is becoming more material part of your business, in the past in 20-20-10. Is there a shift in terms of how you are allocating resources now? Secondly, this may imply more of asking an guidance, but I guess my question is, by when do you envision mobile advertising overtaking display advertising?

**Patrick Pichette - SVP and CFO:** The latter is a very speculative question and not something that one, we don't know and two, if even we knew, we probably wouldn't talk about it. On the question of allocation of resources, I think at the end of the day Larry talked about sort of our jobs to use our best judgment based on the sum of opportunity, business opportunity and so forth, to divide if you will, between classic core businesses, you're really asking in some of these emerging ones. So, we are informed by the hockey stick nature of these things. So, there is a couple of ones, give you an example of Android, which is small in resources and growing very quickly, so, they pretty much have been able to get whatever resources they need and they are going up against very large giants with the



factor of ten more resources, and so we sort of measured it that way. When we then go back and saw for 70-20-10, it turns out that we're roughly consistent with 70-20-10. It's not really as much of a formula, as is much looking at where the real excitement is. The other thing that we're doing is we're organizing ourselves and Nikesh is actually leading this effort into more of an internal business unit structure, because frankly, it's just become so large and so complicated that it's been difficult for us to keep track of all the details. So, that will give us a better tie in between where the current and future revenue is, and where the resources are going, and I think Nikesh is on the order of 10-15 kind of structure by the time you're done, with the obvious big ones being, search and ads and display and enterprise and that kind of stuff, YouTube.

**Patrick Pichette - SVP and CFO:** Closing on that, what really matters the most to us, as we actually do the resource allocation is as Eric said, when you see a hockey stick, pour on gas on that fire and when we do actually and we keep the flexibility to make sure that we really feed the winner, so, that they keep the momentum as you've seen for example in Android in the last 24 months which has been tremendous.

**Operator:** Mark May, Needham & Company.

**Mark May - Needham & Company:** Big picture question about data, because that seems to be an increasing factor of differentiation in growth for online ad companies. How does Google think generally about leveraging user data both to better target ads and how to stay competitive with those like, Facebook and Microsoft and Yahoo! that are leveraging data possibly more so than like Google is today. I think this is particularly relevant for using search data for your display business but we'd love to get your thoughts on that?

**Patrick Pichette - SVP and CFO:** We have a pretty strong opinion that we're not going to do very much of it. The reason is that we take our end user data privacy incredibly seriously, and the trust that people have with respect to giving us that information, both their search histories as well as other piece of information, they get very upset very, very quickly, if we in their view misuse it. So, what we typically tell people is, we're not going to do the kind of things that you could do it, thus, in particular, use to generate sort of strange apps against your history and things like that, without your explicit permission, and we probably in many cases won't do it for ever.

**Operator:** Marianne Wolk, Susquehanna.

**Marianne Wolk - Susquehanna:** It looks like you did a great job converting a lot of the advertising on the content network over to display, can you talk about to what extent that's now video-based and is that helping monetization rate significantly? Do you expect that to be sort of a 100% display shortly?

**Patrick Pichette - SVP and CFO:** Nikesh, maybe you want to talk about the display and how it's evolving?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I have been waiting for the entire earnings call, Patrick, to talk about display. I am glad that Patrick and Jonathan have allowed us to disclose the run rate of \$2.5 billion. I think this puts us in one of the top three display networks



in the world. I also believe that the technology suite we offer is second to none. So in terms of the video versus the other display formats, it is primarily a lot of this is still display in terms of banner ads and other formats, and video is beginning to come into it. But we believe in the future there is going to be a lot more rich media involved into display network, because as we go forward you're going to see more and more monetization of video, but that is on YouTube or other partner sites that's going to happen. So we believe the display network we offer has maximum frequency and maximum reach. We can reach people more times a day than anyone else, so really excited about display. I was not sure what you meant by what becomes 100% of display?

**Marianne Wolk - Susquehanna:** I'm sorry, but of the sort of roughly 1 million partners that are part of the partner network, to what extent is that now converted to display and could that ultimately be an entirely display network? Then also just since I've got you, can you clarify the run rate information you gave? Is that a trailing 12-month figure or are you annualizing the current quarter?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** So I'll let Patrick answer on how we commented on \$2.5 billion dollars, but in terms of the million partners we have, the entire partner network is part of our display network that we offer, and we actually have the ability to offer them display advertising or text-based advertising, and basically it's based on ROI and CPMs that we make that determination or the publisher makes the determination or the advertisers make the determination. So, an entire network that we have is open for display advertising already.

**Patrick Pichette - SVP and CFO:** On the fourth question, it's just the trailing quarter. So, with that, thank you for your question, Marianne. Let me give you a couple of thoughts, one is, just want to reiterate that what we did today, was give you a few indications of why we believe we're successful in these emerging businesses. These data points are not about giving you more information on the coming quarters, but more to give you the confidence that where we're investing in is really fueling great growth rates and building meaningful businesses. I want to thank you Eric for taking the time. I know he is running for the plane, but its terrific to have you on the call and take a few minutes with our analysts and shareholders, and then I also want to take a moment to thank all the Googlers for their hard work, I mean, all this strong performance is really on the back of fantastic work from our team worldwide, our great engineers, our great sales force and our great support staff, everywhere. So, I just wanted to take from the OC, just the time to thank them again in the public domain because they do such a terrific job. With that Connie, I'll let you close the call.

**Operator:** Thank you and this concludes today's conference. We thank you for your participation.

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# EXHIBIT H

# BUSINESS INSIDER

## Google's Android Is Making Boatloads Of Money, Says Schmidt--Way More Than It Costs To Make

Henry Blodget | Aug. 5, 2010, 9:44 PM | 5,831 | 45

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Google's Android bet is paying off spectacularly--not just in terms of smartphone market-share but financially, according to Eric Schmidt at the Techonomy conference (relayed by TechCrunch's MG Siegler).

In addition to being the software platform on an astounding 200,000 Android-based phones that are activated every day, Android is helping Google drive more than enough incremental search revenue to pay for its development--and then some.

Here's the money quote:

"Trust me that revenue is large enough to pay for all of the Android activities and a whole bunch more."

And what is that revenue, given that Google gives Android away for free?

It's just search revenue--so don't get excited about some massive new revenue stream. And given that people don't buy a ton more stuff just because they can now search on their mobile phones, a lot of the revenue is presumably cannibalized from computer-based searches. But it's revenue that Google might have lost if it hadn't developed Android.

The whole impetus behind Android, after all, was to control the search experience on mobile devices, which Google rightly recognized would one day dwarf the number of desktop and laptop computers. And with Android activations now at a run-rate of 73 million a year (200k/day X 365), Google is well on its way to achieving that goal.

Here's the video of Eric's chat with reporters:

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Summary

# EXHIBIT I

## Google Inc. GOOG Q2 2010 Earnings Call Transcript

### Executives

- Jonathan Rosenberg : SVP, Product Management
- Nimesh Arora : President, Global Sales Operations and Business Development
- Jane Penner : IR
- Patrick Pichette : SVP and CFO

### Analysts

- Sameet Sinha : JMP Securities
- Steve Weinstein : Pacific Crest Securities
- Spencer Wang : Credit Suisse
- Douglas Anmuth : Barclays Capital
- James Mitchell : Goldman Sachs
- Sandeep Aggarwal : Caris & Company
- Jason Helfstein : Oppenheimer & Co.
- Imran Khan : JPMorgan
- Scott Devitt : Morgan Stanley
- Ross Sandler : RBC Capital Markets
- Youssef Squali : Jefferies
- Jeetil Patel : Deutsche Bank
- Mark Mahaney : Citigroup
- Aaron Kessler : ThinkEquity Partners
- Mayuresh Masurekar : Kaufman Brothers
- Brian Pitz : UBS
- Justin Post : Bank of America
- Colin Gillis : BGC
- Jordan Rohan : Stifel Nicolaus
- Tacky Perry : FBR Capital Markets
- Richard Fetyko : Merriman & Co.

Transcript Call Date 07/15/2010

**Operator:** Good day and welcome everyone to the Google Inc. Conference Call. This call is been recorded. At this time, I would like to turn the conference over to Ms. Jane Penner, Senior Manager, Investor Relations. Please go ahead, ma'am.

**Jane Penner - IR:** Thank you, Connie. Good afternoon, everyone, and welcome to today's second quarter 2010 earnings conference call. With us are Patrick Pichette, Chief Financial Officer; Jonathan Rosenberg, Senior Vice President, Product Management and Nimesh Arora, President, Global Sales Operations and Business Development.

First, Jonathan and Patrick will provide us with results on the quarter and then Nimesh will join us to answer your questions. Also, as you know, last quarter we began distributing our earnings release exclusively through our Investor Relations website located at investor.google.com. So, going forward, please refer to our IR website for our earnings releases as well as supplementary slides that accompany the call. This call is also being webcast from investor.google.com. A replay of the call will be available on our website in a few hours.

Now, let me quickly cover the Safe Harbor. Some of the statements we make today may be considered forward-looking, including statements regarding Google's future and investments in our long-term growth and innovation, the expected performance of our business and our expected level of capital expenditures. These statements involve a number of risks and uncertainties that could cause actual results to differ materially. Please note that these forward-looking statements reflect our opinions only as of the date of this presentation and we undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements in light of new information or future events.

Please refer to our SEC filings for a more detailed description of the risk factors that may affect our results. Also, please note that certain financial measures we use on this call, such as operating profit and operating margin are expressed on a non-GAAP basis and have been adjusted to exclude charges related to stock-based compensation. We have also adjusted our net cash provided by operating activities to remove capital expenditures, which we refer to as free cash flow. Our GAAP results and GAAP to non-GAAP reconciliation can be found in our earnings press release.

With that, I will now turn the call over Patrick.

**Patrick Pichette - SVP and CFO:** Thank you, Jane. Good afternoon, everyone, and thank you for joining us. As Jane mentioned, Jonathan and I will begin with the prepared remarks, but we also have Nikesh with us for the Q&A.

So, let me start you by giving some high level thoughts about the quarter and then we will get into our detailed financial performance. So, overall, we are very pleased with our Q2 results. We experienced continued solid growth in our core but also very strong growth in our emerging businesses year-over-year. Taking a step back actually, these results reflect a few really important trends in the digital advertising. First, we are really taking notice that more and more traditional brand advertisers are embracing search and search advertising as a way to build their brands online.

A case in point, P&G. It's one of the largest brand advertisers in the world, and it's now one of our top advertisers in the U.S. Second, we see also a real trend in large advertising focusing on highly measurable but also integrated campaigns across display, mobile, and search. So, as a result, we saw strength in every major product in Q3. Google.com was strong with strong performance across major geographies and most major verticals, including CPG, retail, travel, et cetera.

Our growth in display was also very strong. Our continued focus in this product area is clearly generating results. Our display network, which includes YouTube, is growing very rapidly. The scale and quality of our network continues to increase, and we see increased demand from traditional brand advertisers in that space as well.

In addition, we made yet another significant stride in display this week when we entered into a strategic agreement with Omnicom Media Group. We'll be working together with Omnicom to co-develop their exchange trading desk for the DoubleClick Ad Exchange in the coming years. YouTube; specifically, we continue to see very impressive growth as brand advertisers also consider it a must buy. For

example, and as I mentioned a moment ago, in Q2 we ran World Cup advertising campaigns for major advertisers of the likes of Coke, Visa, Nike, Sony, et cetera.

Finally on YouTube; I think, it's really worth noting that we're very pleased, of course, with the court's decision to rule in our favor in the Viacom case, but more important in this victory, it's not for us but for the users and just the web in general, specifically for all the blogs and the community forums across the web that do rely on this user-generated content for sharing information and also for free expression. Look, we were very passionate about this issue at Google, and so much so that we have made a significant investment of approximately \$100 million to win this case, and once again it just was the right thing to do and we did it.

In mobile, our revenue continues to grow as advertiser increasingly opt into their mobile specific campaigns, and with the successful completion of the AdMob transaction in Q2, our business is gaining momentum, and so we have a very competitive mobile advertising platform now. And, of course, underpinning our growth is the success of the Android platform itself, with over, as we announced a couple of weeks ago, 160,000 devices activated daily. That's two every second, and it creates an even larger base of data-centric smartphone users.

Finally, Enterprise had another good quarter with several high profile deals, including for example Virgin America. The world is simply moving into the cloud. Successful products do require investment, and that's why we're focusing our resources on products that as you all know leverage computer science to solve our big problems, offer great ROIs, and very large growth opportunities.

For example in Q2, we've added approximately 1,200 employees. That's obviously counting the acquisitions of AdMobs and the others, but the majority is done in engineering and sales, and in the following product areas; search monetization, display, mobile, apps, all the next billion dollar businesses that are growing incredibly rapidly and that's why we are investing into it. Jonathan will give you more details about that in a moment.

So, now let me turn to our financial results. Gross revenue; gross revenue grew 24% year-over-year to \$6.8 billion. Our Google Website's revenue was also up 23% year-over-year to \$4.5 billion, which strength as I mentioned across most geographies and verticals. Our AdSense revenue was up 23% as well to \$2.1 billion reflecting our continued strength specifically in the Google Display Network. Other revenue was up also 39% year-over-year to \$258 million and it includes the last quarter of revenue from the sale of Nexus One.

As announced, we are discontinuing the direct-to-consumer channel in Q3, and as a result beyond Q3 we won't recognize any revenue or cost associated with the sale of Nexus One. They are still being sold through various carrier partners both in the U.S. and Europe however.

Our global aggregate paid click growth remained quite healthy, up 15% year-over-year and down 3% quarter-over-quarter due to the typical summer seasonality. Aggregate cost per click growth was up 4% year-over-year and 2% quarter-over-quarter. Note that the FX had a positive impact on our CPC growth year-over-year and a negative one quarter-over-quarter. Remember too that this is an aggregate number and it includes both Google.com and our AdSense properties.



Turning now to our geographic performance. On a relative basis, the U.K. lagged a bit to global economic recovery certainly relative to the U.S. and rest of world which were strong. Revenue from the U.S. was up 26% year-over-year to \$3.3 billion and in our earnings slides, you'll find on our Investor website, you'll see that we've broken down our revenue by U.S., U.K. and rest of world to show you the impact of the FX and benefits from our hedging programs. So please refer to these slides for these calculations.

International revenue accounted for 52% of our total revenue or \$2.5 billion, was up 21% year-over-year which includes \$79 million benefits from our hedging programs. This is compared to \$124 million of benefits in Q2 of last year. If we used fixed exchange rates, our international revenue would have been roughly \$24 million lower year-over-year. The U.K. was up 8% year-over-year to \$770 million.

Let me now turn to expenses. Traffic Acquisition Costs were 1.7 billion or 26% of our total advertising revenue. Our cost of revenue was \$735 million including stock-based compensation of \$8 million and also expenses related to the sales of the Nexus One. And finally all operating expenses totaled \$2 billion, this also including \$301 million of stock-based compensation.

The increase in year-over-year OpEx is really primarily due to increases in payroll, professional services and advertising and promotional spend. So, the result of all this, our non-GAAP operating which excludes stock-based compensation increased to \$2.7 billion in Q2, resulting in a non-GAAP operating margin of 39%, essentially the same as last year.

As I mentioned already, our headcount was up approximately 1,200 heads versus Q1 and in the quarter we had 21,805 full-time employees and again that reflects the acquisitions as well.

Our effective tax rate was up to 24% in Q2 versus 22% in Q1, essentially due to the mix of earnings between domestic and international subsidiary and the impact of our hedging program. Let me quickly turn to cash management, other income and expense was \$69 million for Q2, which includes good progress in our portfolio management performance, although it was somewhat offset by the impact of our hedging expenses with FASB 133.

For more detail on the OI&E, again please refer to the slides that accompany this call on our IR website. In addition, we've announced today a \$3 billion commercial paper program and a related credit facility. This to us is an important step in establishing a more capital-efficient structure that will provide us with low-cost working capital availability and flexibility and it's also an excellent time to do it given the historical low interest rates.

Operating cash flow was very strong at \$2.1 billion. CapEx for the quarter was \$476 million, again primarily related to our data center operations, and as a reminder, we continue to make significant CapEx investments and they just turn out to be lumpy from quarter-to-quarter. Our free cash flow, therefore, stands at \$1.6 billion in a very good position. So if you take a step back from all these numbers, here's where we stand. We are very pleased with our Q2 performance seeing growth across revenue, margin, and cash flow, and it really paints a picture where we are very confident about our future, and that's why we continue to

attract and hire among the best talent in the world to further invest in our growth agenda.

So, with that and before we open up to questions, let me turn over to Jonathan for his comments. Jonathan?

**Jonathan Rosenberg - SVP, Product Management:** Okay, well, thanks, Patrick. So, let me start with search. Search used to be pretty simple. You'd enter a query, and we'd return a bunch of links to websites, but now the web is much, much more complicated. There's videos, there's books, there's music, there's news, just about any type of media you can name is online. So, the scale of the web now is grand and it isn't slowing down.

To keep pace, we migrated a whole lot of our index to a new infrastructure, which we call Caffeine, and Caffeine is basically a new way of updating our index. So now when we find a new webpage or new information like a video or an image, we add them straight to the index without a delay. This means that the results that you get are a lot fresher and in fact they are about 50% fresher than before.

But then once you get your results, you need tools to work with them to get to the right answer, and we've launched a new UI that has a bunch of options on the left hand side to help you filter those results. I especially like the timeline feature, which I think is great when you're doing research and you want to see results from a particular time. So, you can enter say oil spill, and click on timeline and 1969 and you can read all about the big Santa Barbara spill that led to the ban on offshore drilling in California.

On the other hand sometimes you just want an answer. The query is effectively the result and we're getting much better at knowing when that's the case and giving you what you need. So, enter for example, Barack Obama birthday and you'll see what I mean. You'll see his birthday listed August 4, 1961, and citations for the different sources where we got that information. All this works in Suggest too, trying typing capital South Africa, by the time you get to the first 'A' in Africa we tell you, it's Pretoria.

I ploy all these things out because the great things about features like these is most people I think don't even notice the changes. They just notice that they get their answers fast. I think, I mentioned on the earnings call back in January, that we're working on putting more word behind fewer arrows and search innovation is definitely one of those arrows. Our pace here is actually accelerating.

Voice search added six languages. We launched spelling full page replacement. Suggest with spell correction and over 100 quality enhancements. So, there's lots of stuff going on. In fact there is so much that we're putting out a weekly blog post to document all the search improvements. But interestingly as search gets better, it actually creates another huge challenge for us. The ads need keep pace and get better too. Otherwise what would happen is, people will click on relatively fewer ads, and that would be bad. So, this dynamic where consumers are in control holds for all types of media and not just search. It used to be, consumers had to watch, see or listen to whatever the advertiser wanted to show, but now they don't. I think this is a fundamental shift for the advertising industry, when people don't have to watch your ads, what do you do? Well, you have to make ads people

actually want to watch.

I was in a Piazza San Marco in Venice a couple of weeks ago and there was the huge billboard advertising a ski jacket. It was like 90 degrees and we were sweating in shorts and T-shirts, and I looked and I thought, what a waste of money. So I took a photo of the ad with my smartphone and I sent it to my team as proof, there is lots of upside in improving ads. And this quarter we made great progress on that upside. We added new ad formats and we focused even more on quality. The new formats led advertisers put more useful information into their ads, such as pictures of a product or a local address or a phone number. It turns out that when you are searching for something from your phone you are much more likely to click on the ad what has phone address in it. This seems obvious, but now we actually know from the data that it's true. One of our customers Carnival Cruises increased bookings from mobile phones by 175% when they included click-to-call ads.

Lastly on ads, I know you often ask about headroom in ad's quality, and I am thrilled to say, we had one of our most productive quarters there in the last couple of years, over a dozen launches on search with a strong impact on revenue. We did things like put better ads on the second page of results, where we realized that the ads weren't as good. And we also had over 20 quality improvements on the Google Display Network.

Display, by the way, is going very well. One recent development is that we're working closely with our agency partners to help them move to what they call an audience buying model and I think this is another fundamental shift in advertising where the ultimate goal is to designate a particular audience on our network, like say women between 18 and 35 who like basket ball, and then we automatically target that audience for you.

We're also making progress with features like remarketing which we launched last quarter. Advertisers can reach people who already visited their sites. Interest-based advertising, which we launched last year, is also working very well and so is the Double Click Ad Exchange which we launched in Q3. We've got several of the top ad networks on it and we are tracking some big buyers like agency holding companies. Advertisers really like the technology which is real-time bidding and publishers like that its' open to all advertisers and ad networks who they want to work with.

We want to be open in everything we do. We believe open systems are better for the web, they are better for competition, they are better for the user. This is not philanthropy. When web is better, more people use it more often and that means they search more often. Android is a leading example of this.

As Patrick mentioned, we are now activating over 160,000 Android devices every day. This is up from 65,000 last quarter. What's even more interesting there is that most of these devices are developed completely independently of Google. One of those is the Sprint EVO which is actually my favorite phone right now, has a big screen, it's got great video, access of WiFi hotspot for me, it has 4G bandwidth at least when you are on Mountain View.

The Android market is also open of course and now has over 70,000 apps, that was around 30,000 in April. As you look at all these new apps being created, you also

realize that your mobile phone isn't alone anymore. It's actually connected to several million computers 24x7. This is letting us do things that we used to think weren't possible.

We just released a new version of Goggles that lets you take a picture of something in another language with your phone and it translates it for you. I actually used this a lot to read menus on my vacation in Italy. You literally don't have to guess what you're going to eat anymore or say you want to read about how the locals are celebrating their World Cup victory. Congratulations to Spain by the way. Anyway, you just go to elpais.com, and Chrome or Toolbar automatically translates it for you in a second.

So, cloud computing also means the enterprises can take advantage of these innovations. We just launched this feature where if you have say a PDF or the image of a scanned document, you can upload it to Docs and we'll covert it to text, so you can edit it. You don't have to install any special software or anything. If you are a Google Apps customer, it's just there and it works.

Of course, the cloud is pretty good for wasting time too. I hope you played with our Special Pac-Man doodle. We put it up on May 22 to celebrate Pac-Man's 30th birthday, and we estimate people spent 4.8 million hours playing it. If you missed it, go to a Google.com/pacman, 'bloop bloop bloop'. Thank you for your time.

Back to Patrick.

**Patrick Pichette - SVP and CFO:** Thank you, Jonathan and, yeah there was this great reports of billions of billions of productivity lost over that doodle Pac-Man. So, obviously, we did something right somewhere. Connie, can you actually turn on the Q&A process, and I'm going to invite Nikesh to also join us at this time.

Transcript Call Date 07/15/2010

**Operator:** James Mitchell, Goldman Sachs.

**James Mitchell - Goldman Sachs:** Thank you for the Pac-Man distraction a few weeks ago. My question was about the sequential increase in operating expenses. I was wondering if there was any adjustments to the bonus accrual that went into that sequential increase or was it entirely due to headcount additions and acquisitions and marketing?

**Patrick Pichette - SVP and CFO:** The bonus accrual would have a small impact on it, so it is really about headcount, about (TVCs), about marketing.

**Operator:** Spencer Wang, Credit Suisse.

**Spencer Wang - Credit Suisse:** Two quick questions, first in terms of the paid click of 15%, I was wondering if you could just give us a sense of how much of that is coming from mobile today currently versus a last quarter? And then the second question may be for Patrick just on TAC. It was down a little bit year-over-year, flat sequentially. Can you just give us a sense of where you think on a percentage basis that's trending, especially with the MySpace deal coming up shortly?

**Jonathan Rosenberg - SVP, Product Management:** Yeah. This is Jonathan on the mobile question. Mobile is certainly growing faster than other clicks. So

everything else is being constant, there is a disproportionately larger group of mobile clicks this quarter than in quarters in the past. But we don't really have any more detail than that.

**Patrick Pichette - SVP and CFO:** In the case of TAC, it's been I mean most of the TAC that we have today because as you said so rightly that MySpace deal is ending now. I mean, we shouldn't see any that there is no big jump anywhere in (the tact) going forward, and it's been pretty stable actually around, I think, you said 27%, and so there's very low variability in it.

**Operator:** Imran Khan, JPMorgan.

**Imran Khan - JPMorgan:** Two quick question, one, the 1,200 or so headcount increase, could you give us some sense like where are you allocating those headcount, is it in search or most of the headcounts are going to new initiatives, and also secondly in terms of the cost per click, can you give us some sense, the differences of cost per click mobile versus desktop, and how quickly you think it can narrow?

**Patrick Pichette - SVP and CFO:** So, why don't I start with the 1,200, so remember 1,200 just to give a bit of clarification there is probably around 300 of those 1,200 in estimates that come from M&A, so really kind of organically, if you think about it more like 900 which was nothing like last quarter. As I mentioned in my core notes, Imran, the most of the headcount is in engineering and sales and most of the headcount like the vast majority is going to the four core areas of focus of the company, so they are about search and search monetization. They are going to mobile and Android, they are going to apps, and they are going to display. We see so much momentum in each of these right now that that's where the bulk of the resources are going, because that's where the focus of the company is. On the CPC, Nikesh?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** On the CPC, I don't think there is enough data for us to actually look at the trend in terms of whether it's closing or not, but you have to understand the mobile advertiser sees mobile as a very different platform vis-à-vis the desktop advertiser. You see high CPCs where there are transactions that can be consummated on the mobile, i.e., in digital entertainment, you don't see as high CPCs as when you're trying to give directions to a certain restaurant or a place where they might conduct commerce. So there's still some disparity between the CPC in desktop and mobile, and within mobile depending on the verticals there is disparity depending upon the type of advertiser.

**Operator:** Justin Post, Bank of America.

**Justin Post - Bank of America:** My questions are about Android. Can you talk about how much investment is going into that platform, and then how do you think about it? Is this an investment that just needs to keep going just so you can compete in the mobile market, or you're not charging for it, is this a real installed base revenue opportunity, and we're going to start hearing more communication about how you're going to monetize it down the road?

**Patrick Pichette - SVP and CFO:** Okay, so let me give you a high level answer to kind of give everybody comfort, right. Android is not in terms of cost, it's not

material to the Company, and not only that but let me give you a further kind of proof point of the value of Android is, some of the key products that have been launched over the last few weeks and few months, have not been developed by Google at all. I think that the last Android X or the Motorola Droid X has been developed by Motorola directly with Verizon and not involve the any of the Google resources, So it's not a huge resource investment, it's a formidable return in that what you have is the entire ecosystem exploding, and I'll let Jonathan give you really the sense of that one. So from a cost side, it's non-material. Jonathan?

**Jonathan Rosenberg - SVP, Product Management:** Well, I mean, we gave some data just on the scope of the numbers, the \$160,000 Android devices as well as the growth in apps from 30,000 to 70,000, but I think the most important, the most obvious thing to think about from our perspective is what's the most popular app on this devices? The most popular app is a browser, and what did people do with the browser on these devices. They search in order of magnitude more than they have on any previous type of smartphones, which they've had in years past, so the combination of people browsing on these smartphones connected on very, very fast networks, and searching on them is basically the formula around how Google succeeds.

**Justin Post - Bank of America:** Are you seeing search activity really strong on mobile devices with Android, and do you think you're losing any ground relative to search activity within applications?

**Jonathan Rosenberg - SVP, Product Management:** Android search grew 300% in the first half of 2010, so yes, search on Android devices is exploding.

**Patrick Pichette - SVP and CFO:** I think that another way to kind of frame it in numerical numbers. I mean, the mobile has grown 500% in the last 2 years in terms of the traffic, so think of that and then think of Android being an accelerator of that because every time you bring the NPV of all these platforms coming forward, you get a lot more so that's how to think about the problem and the solution that we bring.

**Operator:** Doug Anmuth, Barclays Capital.

**Douglas Anmuth - Barclays Capital:** Two things I wanted to ask. First, just on the macro environment, can you comment on what you saw at all during 2Q in terms of whether the environment seem to change at all either in the U.S. or Europe and then secondly just given the \$3 billion commercial paper program, and can you update your current thoughts on returning cash potentially to shareholders?

**Patrick Pichette - SVP and CFO:** Let me start with the last one first. I mean, really the commercial paper is a fantastic opportunity for us given the portfolio that we've put place for our cash to actually have the working capital flexibility around us, so now if I need working capital for my day-to-day operations I have that flexibility through commercial paper and that's really the essence of what we're doing. We have made no decisions at all on share buybacks, or as I said to everyone it's a topic that is regularly debated, brought to the Board for debate, and we have nothing to announce on that one. On the macro side, I would say look there is kind of two things, right. Everybody reads the press, everybody has seen



how everything will happen in Q2, the Europe, the debt, the this, the that. I mean for us at Google it's been a great quarter. We've had our business has been a great quarter, and we've seen no impact of what's going on in the macro world to us, and that's why we said for the last three, four quarters we've said we're really pleased with how we're kind of performing in this kind of economy, and that's why we feel confident about the future and feel confident about investing now, and that's why we're doing it.

**Douglas Anmuth - Barclays Capital:** If I could just follow-up quickly on the first one on cash. Can you comment on how much of your cash is international versus in the U.S.?

**Patrick Pichette - SVP and CFO:** It's about 50/50.

**Operator:** Brian Pitz, UBS.

**Brian Pitz - UBS:** Would you talk about your advertiser end user adoption of some of the new product ad formats that we're actually seeing on your site. Are these ads having material impact on CPCs, because we understand they are being sold on a CPA basis?

**Jonathan Rosenberg - SVP, Product Management:** I mean, this is Jonathan. I can give you a quick review of the top formats and then maybe Nikesh can chime in and give you a sense of some of the specific customer experiences that he's had. The Click to Call ads on the high-end mobile phones are doing very well. The Click-Through rates go up 6% when you put ads with a phone number, 8% when you put a local address. So Click to Call is doing very well. It's easy to see some of those. If you want just take a look for yourself if you tried travel agency from a smartphone you will see then there are thousands of active campaigns on click-to-call so you can take a look at that. Site links is also making pretty good progress. We've given you examples on past calls where you type a big brand like Sears and then you see the more useful links that you can get through and the click through rates on those can go up as much as 30% over the ads without the site links. But we changed the way we do site links and we've added a new one line format, and that also allows site links to show up in more places. You can try flowers if you want to see that. Then the other format that's getting some adoption is the we're adding the seller ratings which shows merchant's ratings out of six stars aggregated from reviews on the web. You see that if you look for things like digital cameras, and that's doing pretty well as well.

**Patrick Pichette - SVP and CFO:** Nikesh, any further thought?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** No, I guess from an advertiser perspective, they've always had a sense that over the last few years we have actually had some disparity in the quality of natural search and quality for ads. Things like site links create tremendous parity between what people get in natural search and what they get in from an ad format. So there is tremendous appetite on our large advertisers to be able to send their consumers, or their users to a deeper part of their website with site links for now. So the adoption of site links, the adoption of click-to-call, as Jonathon said is, extremely sort of more lucrative for them because they can actually track it, and they can actually track the transaction that it creates. So



these new ad formats are definitely helping and are getting out there. One thing which Jonathon did not touch upon is the ad innovation on the display side as well. We've had tremendous new formats we've launched on whole YouTube front, where we actually increase the inventory because we get more and more content where we can show ads on. In addition to that, we also have new ad formats which effectively imagine a basic ad and now getting it to be in auto-expandable master, which shows up on YouTube, which allows us to impact the pricing of the ad format. So the more richer the ad, the more an advertiser is willing to contribute because it creates a more engaging experience and therefore a higher revenue opportunity. So, I think across the board the new ad formats are both we are seeing more appetite for them and at the same they are allowing us to create more return for the advertiser, allowing us to price them better.

**Operator:** Ross Sandler, RBC Capital Markets.

**Ross Sandler - RBC Capital Markets:** Just two quick questions. Patrick you said that costs for Android are fairly immaterial. So, can you talk about the operating margins in a display business on a revenue (ex-tax) basis? How much of the margin compression that you are seeing right now is coming from display growing faster than search? Then second question is looks like the ROW region accelerated a bit in the second quarter as you strip out the hedging and currency impact. Can you talk about in the cash which regions are driving that and can you specifically talk about the environment in Europe, given the macro. I know you talked about it for a second earlier but just any further color about comment on Europe? Thanks.

**Patrick Pichette - SVP and CFO:** The display business has to a certain extent if you take it as a blended, slightly lower margins if you take the DoubleClick platform for example, which is more transactional. But overall, I think that, they still are quite healthy and they don't if you think of CPCs the way I think about them is you have really kind of two big components at work, the innovations that Jonathan talked about that actually drives CPC up and then because those products better they add pressure to the auction and therefore drive CPC up. Then the two, the two or three components that actually drive them down in a short-term actually, it's not as much display as the place is like Brazil and India they are growing very well, so internationally and because they don't have a strong in auction right now, the CPCs are slightly lower but they're growing, so that's positive. Then we already talked about mobile themselves as being lower CPCs. These are the two that actually are growing incredibly rapidly in that. On the mix and the short term, they kind of put a bit of a downward spin on the CPC formula, but both of them as we know, they're growing more rapidly, So it's real dollars net in and then on top of that, we know there's going to be future pressure in them. So I'm pretty pleased about the performance of those. On the issue of Europe and FX, it's really everybody's got their model out there, right? We've lived in incredible rollercoaster of FX over the last year, so if you look at currencies like the euro and the pound, they were kind of quite similar on par versus year-over-year, but the last quarter versus this quarter a huge change. And then in addition to that, if you look at places like the real in Brazil, the Canadian dollars, the Yen, those are quite increased year-over-year. So when you do your models relative to FX and (NOINE), just take in consideration the fact that year-over-year, the net-net position is its been strengthening all in. Quarter-over-quarter, it's been going down all in. And then on top of that, our FX kind of or hedging program is really a long-term

hedging program. So this quarter, we've reaped \$78 million or \$79 million of benefit net. So it's a tough puzzle to solve. But just please take the time to look at year-over-year and quarter-over-quarter because it's a puzzle to build. I hope that answers your questions?

**Operator:** Jeetil Patel, Deutsche Bank.

**Jeetil Patel - Deutsche Bank:** Two questions. Do you think that Android and mobile represents a bit of a defensive strategy since you've kind of played yourself on the lack of cost in that business as a whole and at the same time, you are adding headcount as a whole in the company? And then second, just curious, the feedback we keep getting in the industry is that the Android infrastructure and support seems to be lower than what at least your eco system would like. What is the appetite to create other revenue streams outside of advertising inside, let's say, mobile in the form of, let's say, an app marketplace that is pretty vibrant?

**Patrick Pichette - SVP and CFO:** So, let me just give the highest level answer is, the answer is yes, it's both. I mean, obviously having we did it for offensive reasons not defensive reasons, right? We believe that actually open platforms that create the eco system where our developers can actually create a whole set of new generations of apps is incredibly important. In addition to that we do know that these new formats like the smartphones create an entire new set of activities in which you live and you will search and you will transact. So, from that perspective, I think that it's obviously both. I think that I take your comment that if the market in general is saying do you want to more support from us in that space, we're investing heavily because we believe, one, that search advertising, our acquisition of AdMob, right, the investments we're making is because for us advertising is completely nascent in this space relative to text search. Then second is, we ourselves are doing a lot of innovation to cloud computing and others to actually create a whole new generation of apps ourselves. So, I think that yes, defensive, yes offensive, but in the end benefiting everybody. And I'm glad to hear that you say you want us to invest more in it.

**Jeetil Patel - Deutsche Bank:** It seems like your handset vendors are aggressively investing and we haven't seen it from your side at least, as we talk to some of your partners out there. And I guess it seems like do you think that other models such outside of advertising need to be explored at this point?

**Patrick Pichette - SVP and CFO:** I am not sure I understand your question, other models such as what?

**Jeetil Patel - Deutsche Bank:** Let's say, consumer applications, so there are other companies that have created business models around, obviously game downloads, other app downloads that are charged, obviously you have as well, but it seems like you seem to be maybe it's early days, but still early in that development.

**Patrick Pichette - SVP and CFO:** I think, you're absolutely right that it is early days, and I think that the 70,000 apps that we have is actually a demonstration of the effervescence of the ecosystem that's actually just building out.

**Jonathan Rosenberg - SVP, Product Management:** I mean, it is at a very nascent stage, I think, we also there is a lot more infrastructure that needs to be

built to support a lot of the commerce. We substantially need to improve the billing capabilities in the market and that's obviously one of the things that we're investing in pretty aggressively, but I don't think of this as defensive at all. I mean, there's a huge opportunity for incremental usage of search, as I talked about earlier and when we see an opportunity for people searching more that's obviously something that we want to participate in. So we see this platform is winning. We think that gives us an opportunity to build the mobile internet, and we think that in the long run that's going to be good for Google, it's going to be good for the applications developers, and it's going to be good for consumer. So we're investing in building that winning platform.

**Operator:** Steve Weinstein, Pacific Crest.

**Steve Weinstein - Pacific Crest Securities:** I was hoping you could help explain some of the moment in the P&L expenses. You mentioned that most of the hiring is going into engineering and marketing, when I look at the sequential increase by dollars in terms of expenses, you actually had a large increase in G&A about \$48 million sequentially, and that's compared to only like \$20 million in sales and marketing. So can you explain that a little bit more, was there anything in the G&A line that is one-time or not repeatable, or why are they moving like that?

**Patrick Pichette - SVP and CFO:** Yeah, you have to look at, there's a couple of things, one is, our recruiting, if you go year-over-year and quarter-over-quarter, we had kind of three big elements, one is we had our recruiting machine that started to build last year was not built in Q2 of last year. So, if you think of the hiring infrastructure and the people infrastructure has actually been kind of been building and now you see the full flow through. We also have had in G&A in general another area, if you think of everything else that's kind of people, we've talked about legal, we've had a number of legal cost through this quarter, that have also flowed through just because of a number of legal activity that we've taken. So these are the two biggest components that actually would explain the big variances.

**Operator:** Mark Mahaney, Citigroup.

**Mark Mahaney - Citigroup:** Two questions please. A year ago, you talked about being close to profitability on YouTube given all the momentum that you're seeing over the last year. Do you feel like you are a lot closer, are you profitable with the YouTube asset and then secondly when you sell display ads do you feel like you're selling them to existing search customers, or do you think that it's opened up a significantly larger customer pool or a mix of those two?

**Patrick Pichette - SVP and CFO:** So let me talk about profitability, but Nikesh will have the answer to your second on display. Look, we don't comment on YouTube, what I can tell you is we are incredibly pleased by its trajectory. I mean, YouTube is if you take a step back, its 2 billion views per day in its fifth year of existence. It's one over a billion monetization videos per week. It's a huge kind of first page and its aggregating audiences and you see it today to the top brand advertisers showing up for it. Right, so in the World Cup, you saw the Sonys and Cokes and I mean, this is the power of YouTube today. It's like a worldwide audience. So in that essence, I would argue just (indiscernible) it's a great business for us. On the display side, Nikesh?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** Yeah, just to add to what Patrick said. To be fair, what display and YouTube has given us is allowed us in the case of large search customers to complement the portfolio in terms of being able to offer integrated campaigns, which go all the way from branded sites like YouTube to networks like the Google Display Network, and to be able to co-mingle that research, not only that, many advertisers now actually co-mingle that with television ads as well as their print program. So you see a much more integrated campaign capability that begins to happen. We've had examples recently like Patrick mentioned InBev, Sony, Volkswagen at the World Cup. What's interesting is Proctor & Gamble has become one of our larger advertisers in this quarter. That's primarily driven by the ability of CPG companies to both see the value of search in their ability to build a brand, where they've figured out that people research online, and purchase offline. It's called the ROPO effect. So people like P&G are beginning to see that impact. Other consumers companies are beginning to see that impact. In addition to that, we're seeing like Patrick mentioned, the Omnicom deal which we just announced, agencies are beginning to realize that this is an integrated buy. This is a buy you need to do across multiple properties not just YouTube, the Google Display Network, and the Search Network hence the notion of trying to create a trading desk, not just for people like Omnicom, but we have deals in place (indiscernible), and group them, et cetera, as well.

**Operator:** Jason Helfstein, Oppenheimer & Company.

**Jason Helfstein - Oppenheimer & Co.:** Can you comment on Android/Chrome as an operating system, so when we think about Android in of itself on a mobile device or on a particularly on like a cell phone, we can see kind of the revenue opportunity over time with ads in that, ads basically on apps. When you think about Android or Chrome as perhaps an operating system for Tablets or for computers, is there ever a revenue opportunity in the software or should we think of it the same way as we think about Android today?

**Jonathan Rosenberg - SVP, Product Management:** I think, it's probably too early to answer that question. I think, we're mostly focused with Android on building out the platform on getting more smartphones out and on the Chrome side where it's still too early to say.

**Operator:** Scott Devitt, Morgan Stanley.

**Scott Devitt - Morgan Stanley:** Regarding Paid Clicks, up 15% year-over-year. It's been pretty consistently in teens for almost two years now. I was wondering if you could just talk about maybe the top three or four drivers that's keeping that rate at such a robust level for such an extended period of time?

**Jonathan Rosenberg - SVP, Product Management:** I think, the biggest thing is just the continued secular shift in advertising from things offline that are not measurable to the ROI based model of search advertising, where the advertisers can actually see the benefits in the ROI that they're receiving on the money that they're spending. We did see a good bit of that during the recession. I think, there was a disproportionate fraction of budgets that were spent on things where the ROI can be tracked. I think on our side we're doing a lot in terms of ads quality as I mentioned in my scripted remarks, and I think, the ad format efforts that both

Nikesh and I talked about also serve to increasingly drive clicks.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** Just to complement this. I think that we have seen in fact I would argue the Paid Clicks move quite a bit over to last couple of years in response to the recession we've seen that and we've seen a great recovery in Q1 and Q2, and on a year-over-year basis. I think that for us what's really interesting is people are searching, people are continuing the secular trends, as Jonathan said, are happening, and because people are searching, people are clicking and the quality of the ad network and the products themselves continue to improve. I mean we just see the symbiotic relationship happening.

**Operator:** Youssef Squali, Jefferies.

**Youssef Squali - Jefferies:** Two quick questions. I guess first for Patrick. Patrick, as you look at your business needs for the next couple of quarters, do you think that your level of hiring and your level of CapEx which this quarter has doubled from the prior quarter is sustainable, is that the level you need to get to where you want to get to? And second, what are your views on contextual searches that have been implemented by the other search competitors, and which at least on the surface seems to have you guys losing some market share?

**Patrick Pichette - SVP and CFO:** Let me, I'll let Jonathan talk about contextual search in detail. On the issue of market share just to kind of give the highest level answer, I mean there has been a lot of debate about people's methodologies from external sources on market share. And so, I would just even the press itself cautioned all these numbers of late. So, I would just put the flag out again to say just be cautious. I mean, we are very pleased with our results right now in terms of market share.

**Youssef Squali - Jefferies:** Do you feel you are losing market share?

**Patrick Pichette - SVP and CFO:** No. And the issue that we have is, if you think of now, I just want to go back to, because there has been so much noise in this data, I think it's important just to mention it. If you go back to the fundamentals of hiring and CapEx, CapEx is lumpy and here is the perfect example of lumpiness to be able to work in Scandinavia in a winter is difficult as we said we're building a data center there, now it's spring and we're working there. So, we're also adding machines and it just happens that when you get the generations of chips available and everything is available, then you start rolling out. We had a bit of so the lumpiness shouldn't surprise anybody and I think that everybody that I had discussions with when we were at like \$189 million or it clearly also unsustainably low level. So we are running our plans accordingly. So just stay tuned for CapEx, but it's just happened to be lumpy. In terms of hiring, I think that it really is the case that, I am going to take a back to three quarters ago, when we said look, for us the recession is over, for us we see great products and we have a mindset of the next half decade and the big platforms we are building that are creating these huge ecosystems, and for us search is one and then mobile and Android as we just talked about is one. And then Display is amazing, it's really growing and to not put resources to actually fill this ecosystem which is the next decade, it's just such an opportunity. So, that's why we are investing aggressively. We think it's the right thing to do at the moment in the Company, and that's the

balance we are striving. Even in Q3, if you think of headcount, you have a lot of people, I saw so I shouldn't call them kids the people that just graduate from university, they are going to join us. So there maybe even be, you can think of the bump of the accepted but not started, because they are going to go backpacking for the summer because they come and join us. But I mean ultimately, we are looking at a trend of continuing to invest and that is the right thing at this time in the history of the Company. So, that's on CapEx and on hiring. And then on contextual search if there is something that you want to you need a more refined answer for Jonathan, I'm not sure, I understood.

**Jonathan Rosenberg - SVP, Product Management:** I guess I am not sure exactly what data you are looking at or what examples you are referring to.

**Youssef Squali - Jefferies:** I mean, the two main competitors have adopted some processes that in a way inflates their the number of searches that are run on their databases and you guys don't do it, wanted to just know if this is something that you guys may pursue as well or just...?

**Jonathan Rosenberg - SVP, Product Management:** I understand. I mean generally, we don't comment on the third party data but what you are alluding to are basically the methodological problems that have been publicized with respect to auto-roll slide shows that generate. Basically, if you think about it from a search perspective, it's a spurious request because it's not duly an incremental search. So the right that matters to us is ultimately consummating transactions by conversions that we're sending to advertisers. So what we care about is the number of genuine searches that users are running where they want to get directly to an answer or a website or whether interested in actually clicking on an advertiser's ad. It wouldn't help us in any respect other than in generating counts in share data to cause the total number of searches to artificially go up if there wasn't user intent behind them that was a value to our advertisers. So the basic answer to your question is no.

**Operator:** Jordan Rohan, Stifel Nicolaus.

**Jordan Rohan - Stifel Nicolaus:** I'd like to delve a little further into some of the growth that you're seeing in rest of world territories. Can you talk about how much directionally growth you are seeing out of Asia versus Europe if that's a breakdown that you're willing to give? If not, can you talk about which countries really stand out from a growth perspective on the positive side?

**Patrick Pichette - SVP and CFO:** I'll let Nikesh answer that one.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I prefer not to talk about regions because in every region, there are countries which do fantastically. And there are countries which are challenged. If you are asking about Greece, I wouldn't have to answer the question. So similarly there are countries like Russia, like Brazil, like India, which are growing fantastically for us and continue to show a good growth. It's a combination of more advertisers. It's a combination of internet penetration getting higher. It's a combination of people getting savvier, advertisers getting more and more ready for the e-world. So, we're seeing good growth this quarter. We saw good growth in Brazil, India, Russia and we saw great growth and then we saw good growth from



many other parts of the world. So, even places like France performed for us wonderfully this quarter. So, even these are larger markets, places like Australia, New Zealand performed well for us. So, I am (lots to) to give an answer on a specific territory, I prefer talking about countries because I don't know how to go visit Asia.

**Operator:** Sandeep Aggarwal, Caris & Company.

**Sandeep Aggarwal - Caris & Company:** Actually I have two questions. One is if you look at the sponsored clicks versus CPC last quarter Paid Clicks were up 15%, CPC was up 7%, Paid Clicks remained at the same level, but CPC have come down quite a bit. I know some of this is mix shift, maybe some of this is FX. But I guess my question is, is there any competitive dynamics or maybe increasing focus towards organic search or changing user behavior playing any role in terms of some weakness in CPC? And then I have a follow-up.

**Jonathan Rosenberg - SVP, Product Management:** I think probably the easier way to answer the question is to just give you my quick observations on the things which are clearly contributing to driving CPC's on average up versus those that are impacting them in the other direction. I don't see anything from a user perspective or a share perspective that is obvious that's impacting the overall equation. I think we are seeing on the positive side conversion rates improving which is driving CPCs up. I think your comment about the relative shift in mix to Google.com from AFC does contribute positively to CPC. Google.com is obviously higher, so any mix shift there, everything else been constant increases CPC. The obvious things that we've talked about in the past that push it in the other direction are emerging markets, Brazil, India, and Nikesh talked about some of those examples earlier. Mobile growing in the mix and people increasingly looking for longer tail queries that monetize lower to add into their campaigns, but those are the overall factors.

**Sandeep Aggarwal - Caris & Company:** So Patrick actually the other revenue actually on a year-over-year basis is showing visible slowdown versus last quarter, and you specifically made comments that DoubleClick was very strong, and then also you have Nexus One which is contributing second quarter in terms of incremental revenue source. In spite of these things other revenue was noticeably slowed. So, was it because of some kind of slowdown in the Google Enterprise business or what else is going on there?

**Patrick Pichette - SVP and CFO:** No, I mean in essence it's one word, it's Nexus One. So the quarter-over-quarter impact of Nexus One is driving substantially that change.

**Operator:** Aaron Kessler, ThinkEquity.

**Aaron Kessler - ThinkEquity Partners:** A couple questions. First on China, I just want to clarify that your understanding is that the government is okay with your new solutions in terms of your search link on the .cn site, and just any updates on trends and traffic you can give us that you are seeing in China. Also just in terms of click-through rates for mobile on sponsored ads, any comparison you can give us there versus how you see click-through rates on PC?

**Patrick Pichette - SVP and CFO:** Okay. So I'll answer to China and then I'll let Jonathan talk about the click-through rate mobile versus PC. On China, look we're



basically at the same place when we last discussed or last time I talked about it which is we have the good news is we have our license renewal, but apart from that certainly from a financial perspective I just want to reiterate to everybody, right, revenue from China is not material to our revenue and having said that, right, we have decent revenues for Q2. And so I given the sensitivities of everything that's going on with China, I hope you will understand why. I don't want to talk more about it. We're working very closely to kind of continue to work through this situation. On the click-through rate mobile versus PC, Jonathan insights?

**Jonathan Rosenberg - SVP, Product Management:** We don't actually break out the relative click-through rates on mobile versus the PC. I mentioned, there are new formats and efforts that we've offered that are starting to increase them like the click-to-call offering. I think, the main thing that's really going to fundamentally have to change there, which is the big difference between mobile and desktop is that today on a mobile phone people are actually less likely to consummate a transaction because the logistics of entering a credit card or being signed in on a browser is somewhat more time consuming and onerous. So I think that for the mobile system to move very aggressively is going to require more of those commercial transactions actually being taken and placed on the mobile devices. On the display side, the AdSense for mobile is actually doing very, very well, and one of the reasons that that's doing well is sort of the opposite of what I just stated in terms of effect. On a mobile device, the display ad is something that really kind of gets in your face. The screen is relatively small, so you see it. It's unlike a desktop, in that you're not typically doing multiple things at once. So display I think is relatively closer to the desktop than is search-based ads.

**Operator:** Sameet Sinha, JMP Securities.

**Sameet Sinha - JMP Securities:** Just wanted to, if you could comment on this Omnicom deal that you had signed. Can you talk about what the ramifications are, what sort of advertisers do you expect will participate and any other details would be appreciated?

**Patrick Pichette - SVP and CFO:** Yeah. Sure. You have to understand as we look at display, there are two significant changes that are happening, right. One is display buying which traditionally has been advertisers buying sites is slowly and surely shifting to audience buying, so I as an advertiser no longer want to buy Tiffany.com or NewYorkTimes.com only. I want to be able to say, I'd like 18 to 35 year olds who are savvy, who understand technology, and would be interested in my product. As we go towards that audience buying notion, what advertisers are looking for, is they are looking for specific inventory, and specific audiences whichever site they might be on. So it becomes even more important for some sort of trading desk type phenomena to exist where an advertiser can buy across any publisher they'd like to buy. Now that makes it even more important that you can find some trading desk or trading exchange where you can have every publisher represented because if you have seven different networks, it sub-optimal as an industry to have an advertiser have to go to seven different networks to be able to accumulate audiences for different standards or different ways to seven different networks look like. So effectively, the ad agencies which are buying advertising for advertisers would like to have a common platform which allows them to buy across

these entire networks. And that's what we're working on Omnicom with where they believe that if they have the right trading environment set up for their advertisers, it's going to be tremendous value for their advertisers because advertisers come to a one stop shop and buy across network. And also allows for tremendous efficiency because the best seller of advertiser may not be the best acquirer of a publisher. So, therefore you can separate that in some sort of an ad exchange context, which is what Omnicom is working with us on. And if we get it right there is hundreds of millions of dollars at stake in this kind of a deal because that allows very effective buying across the Board on a network, and every player in that ecosystem can get their fair share of the profit.

**Operator:** Mayuresh Measurekar, Kaufman Brothers.

**Mayuresh Measurekar - Kaufman Brothers:** Could you talk a little bit about search remarketing. It seems that you are by far the leader, and so a lot of display advertisers would need Google for doing this well. So what kind of growth or traction have you seen for search remarketing and what's the pricing for this product compared to other display alternatives?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** We don't do search premarketing. We do remarketing on the display side. We basically are able to go look at what we call interest based advertising. If we understand that certain users are interested in certain things we have based on their they having chosen to allow us to use that information we have the ability to then market to them and show them ads, and that is way more effective than blindly trying to show advertising to users, so clearly we're seeing tremendous success in that area, but that's all we do in terms of remarketing.

**Mayuresh Measurekar - Kaufman Brothers:** And what's the pricing for this compared to other alternatives?

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** The pricing, look, it's very simple, the more effective the advertising is the more likely the advertisers are willing to bid more money for it. So, you should expect the more efficient we make advertising, the more relevant it becomes, the more ROI it generates for the advertiser. They are willing to compete more aggressively with other advertisers for the same piece of real estate. So, we see that. We see the effectiveness of that reflected in higher CPC for that particular product.

**Operator:** Colin Gillis, BGC Financial.

**Colin Gillis - BGC:** Patrick, on the acquisition this year, what is the philosophy on the financial discipline used to determine the purchase price? And then separately with ITA competitiveness?

**Patrick Pichette - SVP and CFO:** I'm not going to comment on the last piece. What I'm going to say is, look, we have there is a real kind of triangulation between three factors in our strategy for acquisitions. So think of it as talent, intellectual property, and then price. And so, what we're looking for is the sweet spot where when we find teams of people that have clear leadership, that if you think about it the venture capital world is actually kind of voted by them surviving though as long as they have and they have as a team great talent, engineering

talent specifically. Then on top of that put the second piece of it, which is they have proven that they actually have good intellectual property, whether it'd be whatever they are working on or whatever in the case, as you just mentioned of ITA, right, a lot of interesting kind of structural data. So the third piece is obviously price. There is a price as to which it's not worthy to us. And then there is a trade-off of on price. And what we do is, we do every one of them. We ask ourselves the question. We look at the intellectual and then let me put the overarching last fit, which is, how does it fit within those four areas that I've talked about earlier, which is where we are trying to accelerate our development. So AdMob is a perfect example of that, where great technology, fantastic team at the right price that basically takes a huge chunk of what was our engineering roadmap and bring it today integrated into the team. And then, we have much smaller team, sometimes of 12 to 15 engineers that have a great piece that actually (indiscernible) and another one like that, right, when you think about the video codec. So it's always a trivia. And there are many cases where we look at them and we don't buy them because we can't find the fit somewhere in those three. So, I mean, that's how we think about it. It is disciplined. We have the base about them. We often say, no, that's how we think about it.

**Colin Gillis - BGC:** There are ample deals that you walk away from just because of the purchase price at the end of the day?

**Patrick Pichette - SVP and CFO:** Yes, we do.

**Colin Gillis - BGC:** Can you just talk a little bit about or help us frame how additive are mobile searches? Is there a rate of search growth you could share for uses across all devices maybe tied to the same login?

**Patrick Pichette - SVP and CFO:** I don't actually have any data, but intuitively I think that they are additive because, I mean, think about it this way, when you are at your desktop, if you have your PC at your desktop and your mobile phone, you are not going to do the search on your mobile phone. So almost all searches that you were otherwise doing on your desktop, I think, you are still going to do on your desktop. On the other hand there are times when you are out with your mobile phone and you didn't have your desktop device and obviously those are, by definition, incremental, unless of course, in theory you'd remember to go back and do that search when you came back to your desktop, but I don't think there is much evidence that that's the case. I think the vast majority of them are incremental. I think there are also slightly different usage patterns across desktop and mobile. You tend to see more use of the mobile devices on weekends, which is not surprising, but they are actually have any more specific data that proves those observations or the hypothesis.

**Colin Gillis - BGC:** I'd imagine those curves, including the transaction curves, ultimately bend towards each other over time?

**Patrick Pichette - SVP and CFO:** I guess I don't understand what you are saying.

**Colin Gillis - BGC:** Our mobile usage in the way we use our mobile is such that we get more broader band, you've talked about your 4G connections and our desktop usage. Ultimately, there shouldn't be much difference between the two of them over time?

**Patrick Pichette - SVP and CFO:** Well, I think the mobile usage is, the mobile usage will grow and in many ways, will be incremental because you'll be able to do a lot more when you are out in the field. For example, being able to within a store scan a barcode with your smartphone, look at the price on the shelf and determine whether or not you actually would prefer to consummate the transaction through a web-based alternative and then automatically complete the transaction, if you kind of think that it's all going to be incremental, and I think as these devices are able to do more of that, people are going to do it.

**Operator:** (Tacky Perry), FBR Capital Markets.

**Tacky Perry - FBR Capital Markets:** Patrick, looking at YouTube beyond views, it's obvious that the majority of those views still aren't being monetized in a way, but what's standing in the way of more monetization of this inventory, which for the most part still seems to be the user-generated content side of things. How significant is it and does the Viacom ruling change your ability to monetize that inventory?

**Patrick Pichette - SVP and CFO:** I'm going to let Nikesh give you the kind of high level answer. Then I'll circle back on the Viacom specific.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I'm going to let Patrick talk about the Viacom, but you have to understand first of all, YouTube is five years old, right, so this is a phenomenon that have been created over the last five years. We look at YouTube and we monetize it in many different ways. We monetize the home page of YouTube. We monetize more watch pages on YouTube. We do promotional videos, and we are looking at various new ways of looking at how we can put ads into content. Now, part of the process that has been going on is we have to continue to free up more and more inventory for it to be available for us to advertise on. So we've done a lot of deals recently where there was a music societies around the world and various countries around the world, but we are getting permissions to be able to show advertising in those places, which allow us to create more inventories. So, that's the inventory side of things, and we believe we're in a good path to continue to create more and more available inventory. In addition to the inventory side, we have to now keep getting advertisers to start giving us quality video advertising, which can be put into YouTube. And my view on this is that we're in the very, very early stages of video advertising, because what advertisers do they will supply some video ads that they've created for television and they will stick it on YouTube. Now, if you understand, YouTube allows you two more things, which television does not, A, it allows you to interact with the ad, which TV does not. And most of the video ads so far are not interactive. So, they expect as that begins to happen people will start creating more and more (indiscernible) with this. Secondly, it allows you to create some degree of personalization. The ad your grandmother sees and I see or my daughter see need not necessarily be the same ad for anything. So, both those features we think will come into play more and more in the advertising side. So, as we get more personalization, more interactivity, as we get more inventory clarified for YouTube, we think that it's going to create more modernization opportunities. You couple that with the previous conversation on display and the ability to buy audiences, that would just provide some of the icing on the cake as this thing goes forward.

**Patrick Pichette - SVP and CFO:** On my side look on the issue of ICOM right, we're still in the appeal side. I don't want to comment on the specifics. What I can say is two things, right. Obviously, with more clarity from this judgment, it gives us more room for experimentation that we didn't have before because until these rules are clear, you don't know exactly where the bar is. With that clear bar, we now have much more room for experimentation. And then just to comment on if there was ever a great illustration of Nikesh's point a minute ago, I mean just looking the last few weeks about the Old Spice experiment on YouTube and if you have not tried, that just go on YouTube and check Old Spice about the interactivity of Twitter, Facebook, YouTube, and advertise, it's just absolutely phenomenal. So, it just gives you a glimpse of where the world is going and it tells you again about we're just scratching the surface.

**Operator:** Richard Fetyko, Merriman & Co.

**Richard Fetyko - Merriman & Co.:** If you break down the components of your display strategy and revenue streams, how would you rank the revenue opportunity of each between YouTube, (ads) display network and the ad exchange in the long-term.

**Patrick Pichette - SVP and CFO:** I'll let Nikesh answer it.

**Nikesh Arora - President, Global Sales Operations and Business**

**Development:** I think it's very important to understand that all of these things work to complement each other. The ad exchange allows a buyer to buy across multiple networks, so without an ad exchange it makes a very inefficient for advertising to be bought and therefore the pie is not going to as soft, so you want to make sure you can create some consistency and standardization in the way display advertising has been bought. If you want to take the big TV dollars to start coming into display as they had been in the early years. I think the Google Display Network is our ability to prove that we can create a network of our own of multiple publishers and create premium capability for our advertisers to be able to target those publishers. And last but not the least, YouTube becomes our owned and operated property, sort of like us operating Google.com and our Google network. So clearly the margins are owned and operated properties are higher and that allows us to have a premium property into space and also allows us to accumulate tremendous amounts of content which we can then offer to advertising. So (basically) all these three are very relevant to the overall strategy. I'm not trying to prioritize anyone over the other, but clearly, YouTube being able to monetize, bringing more TV dollars into YouTube is fantastic, Google Display Network being able to monetize that opportunity across multiple publishers is great and without (AdEx) which is a glue that will bind all these networks together, it is hard to see that industry growing as fast as we'd like to see it grow.

**Patrick Pichette - SVP and CFO:** Let me give if me allow me, the CFO answer, these are each and every one of them, billions of dollars of revenue opportunities, they are not hundreds of millions. The way we think about it in terms of addressable market, this is already a \$20 billion industry that is growing really fast, and so for us every one of them we attack, and that's why again we continue to invest in the total ecosystem. Listen we've had so thank you very much for all of your questions. I want to thank Nikesh and Jonathan again for joining me. I wish to thank every Googler that's on the call listening to us. I mean, our engineers,

our sales force, our support staff all these people, I mean, every 90-days, we look at our results and we continue to be so pleased, but it is really the great hard work of all our Googlers. So for that perspective, I just want to give two thumbs up again to the Googlers for a fantastic job over Q2. With that I'll turn it back over to Connie. I wish you a great summer everyone, and we'll talk to you in Q3. Connie, you can close the call please.

**Operator:** Thank you. That concludes today's conference. We thank you for your participation.

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# EXHIBIT J



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# ECONOMIC APPROACHES TO INTELLECTUAL PROPERTY

*Policy, Litigation, and Management*

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6. **The effect of selling the patent in promoting sales of other products of the licensee:**

The additional profits from sales of noninfringing products that the licensor and licensee stand to make by practicing the patent at issue can be explicitly considered in determining the licensee's maximum willingness to pay and the licensor's minimum willingness to accept for the patent.

However, to the extent that data permitting a calculation of the expected profits from increased sales of noninfringing products are not available, consideration of this *Georgia-Pacific* factor would increase the bargaining power of the patent owner.

7. **The duration of the patent:** The longer the time frame over which a licensee will have to pay royalties for the use of the patent at issue, the greater will be the incentive for the licensee to attempt to invent around the patent. Thus, for long-lived patents, a patent owner may be willing to settle for a lower running royalty rate than it would be willing to accept on short-lived patents, in order to discourage technological leap-frogging of the invention at issue. However, in industries characterized by rapid technological progress, the life-cycle of the products at issue, as opposed to the patent at issue, may be the greater determinant of the final royalty, and the parties may agree to a higher royalty rate because they expect the economic life of the patent to be short-lived.

8. **The commercial success of products embodying the patent:**

This factor should be considered in determining a prospective licensee's maximum willingness to pay for the patent. The higher the incremental sales and profits attributable to the patented technology or features, the more a licensee would be willing to pay for the right to practice the patent. However, if the maximum of the bargaining range is explicitly tied to the profits that the licensee could earn by practicing the patent, then this factor should not also play a role in determining bargaining power.

9. **The advantages of the patent over old modes or devices:** "Old modes or devices" represent potential noninfringing alternatives to the patent at issue. If the patent at issue is a minimal advance over prior art, then the patent will not command a substantial royalty, even if products embodying the patent are profitable for the licensee. As discussed above, if the licensee can earn substantially the same profits by employing an older technology, then the profits from sales are not rightly attributable to the invention at

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